Lectures ON THE SURGICAL TREATMENT OF ANEURISM IN ITS VARIOUS FORMS.

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LECTURE IV.

MR. PRESIDENT AND GENTLEMEN,—Along with the cases of arterio-venous aneurism in the cavernous sinus, we must not omit to mention that reported by Mr. Ernest Hart in THE LANCET of March 15th, 1862. In this case, which I myself had the opportunity of seeing, all the symptoms of arterio-venous aneurism were strongly marked, and it was so diagnosed at the time. Mr. Hart believed that the vessel injured was the frontal branch of the ophthalmic, and it might doubtless have been so, but it was always a puzzle to me how the lesion of so very small a vessel could have given rise to grave symptoms; and now, judging from the many recorded instances in which similar punctured wounds have extended into the cranium, showing the extreme facility with which a pointed weapon may be driven either through the sphenoidal fissure, or the papery bones of the orbit, into the cavernous sinus, I think it more probable that the lesion was in the latter situation, and the vessel wounded the carotid itself. At any rate, all the symptoms were the same as in the proved instances of arterio-venous aneurism in the sinus: the injury, a blow or puncture on the upper eyelid with the forked rib of a parasol, followed by great effusion of blood; the disease gradually generated during the four years which intervened between the injury and operation; the perceptible bruit, of a marked arterio-venous character, heard over the whole side of the head and temple; exophthalmus; a large pulsating vessel running over the roof of the orbit and on to the forehead,—all these are symptoms which are exactly analogous to the proved cases of arterio-venous communication in the cavernous sinus. In fact, a comparison of Mr. Hart's with M. Nélaton's case will leave hardly any doubt that they were of the same nature.

These cases show, then, beyond the possibility of doubt, that a wound or fracture may cause rupture of the internal carotid artery within the cavernous sinus, and that this rupture may be followed by the formation of an arterio-venous aneurism, with consecutive dilatation of the ophthalmic vein, and that this affection is accompanied by all the symptoms usually attributed to orbital aneurism. It is in the highest degree probable, if not certain, that a similar rupture may take place spontaneously. Such cases as that from St. George's Hospital described in my first lecture show that a small crack may form in the carotid artery as the result of atheroma; and this may occur as easily in the curve of the internal carotid within the sinus as elsewhere.

The symptoms of many of the published cases certainly appear to me to lend probability to Dr. Delens's conjecture of their arterio-venous nature, and this explanation readily accounts for the great enlargement of the veins which is frequently present in orbital aneurism, and which often reaches a degree that is difficult to account for merely by the pressure of the small aneurism on the ophthalmic vein. On the other hand, we must allow that, in some of the fatal cases at any rate, Dr. Delens's explanation appears to be refuted by indubitable evidence. Thus in Mr. Nunneley's second post-mortem examination, he speaks of the tumour as "a circumscribed aneurism of the root of the ophthalmic artery." Mr. Bowman's case, reported by Mr. Hulke, is another in which post-mortem examination excludes the idea of any rupture of the carotid artery. Dr. Delens suggests that in this instance, as in some others to which he refers, some minute fissure may have escaped observation; but this I am assured by Mr. Hulke could not have been the fact. And in another similar case, reported by M. Aubry,* Dr. Delens himself is fain to admit that no lesion could possibly have existed in the internal carotid artery, since this vessel was successfully injected so as to fill the ophthalmic artery without any of the injection penetrating into the cavernous sinus.

Common aneurisms situated on the ophthalmic artery and on the internal carotid, both within the cavernous sinus and at its termination in the circle of Willis, have often been recorded—such as Nos. 1687 and 1688 in the museum of this College, and cases mentioned by Guthrie, Demarquay, myself, and many others.

To sum up our present knowledge, then, of these tumours. Travers's original assumption that orbital aneurism is usually anastomotic has been conclusively refuted. Aneurisms by anastomosis sometimes affect the vessels of the orbit, but their symptoms are quite different from those of the disease now in question.† It has been also proved beyond denial that some of these aneurisms are of the arterio-venous form, and I think it is probable that a great number of the successful cases on record were so. But it is equally impossible to deny that in others the aneurism has been of the ordinary circumscribed form. Finally, I do not see how we can avoid admitting that in some instances the usual aneurismal symptoms have been produced by the pressure of enlarged and consolidated veins upon the arteries of the orbit.

The character of the bruit is the main point in the diagnosis of the arterial from the arterio-venous form. A clear, intermittent, blowing murmur can hardly proceed from an arterio-venous communication, which, on the contrary, has a soft continuous murmur interrupted by the intermittent arterial whizz, and this latter is exaggerated occasionally, according to M. Delens, into a piping or whining sound. The difference in the bruit may suffice, then, in some well-marked cases, to exclude the idea of ordinary arterial aneurism.

But the more important question is, whether it is possible to recognise those cases in which no arterial disease whatever exists; and this is much more difficult. There are at least two carefully recorded cases in which all the symptoms of orbital aneurism were present—namely, Bowman's case reported by Hulke, and Aubry's case; and on reading them I cannot see what symptom was absent which is usually taken as decisive of the presence of aneurism. In both there was pulsation and bruit, which, in Mr. Bowman's case, is described before the operation as being synchronous with the pulse, but after the operation as "a continuous musical note swelling out at each pulsation." In Aubry's case the sound is decribed as "a continuous murmur reinforced with the contraction of the heart." In Mr. Bowman's case there was also a distinct history of accident, so severe as to dislocate the malar bone from the upper jaw, and the symptoms dated from the day after this injury. In Aubry's case the patient had not sufficient intelligence to remember whether there had been an accident or not. All this, combined with the exophthalmus and the dilatation of the venous system of the orbit, which existed in both cases, exactly resembled M. Nélaton's cases in which arterio-venous communication was found.

Mere coagulation of blood in the cavernous sinus, without dilatation of the veins of the orbit, will not cause the symptoms of orbital aneurism, as Knapp's‡ cases of thrombosis of the cavernous sinus show; nor, I believe, will mere dilatation of the veins of the orbit, unaccompanied by coagula in the sinus. Dr. Delens refers to a *thèse* by M. J. Dupont in which he has collected the known examples of simple dilatation of the veins of the orbit, in none of which was there either pulsation or bruit.

It is possible that we may hereafter learn the pathology of these affections, and the more so since the attention of surgeons has been forcibly called to the subject, not only in this country, but in America by Dr. Morton's, and in France by MM. Demarquay and Delens's writings. But at present all that we can say is, that the symptoms of orbital aneurism are in some cases exactly imitated by cases in which only the venous system is affected. This fact, however, though only a negative one, forms obviously a very powerful motive for caution in undertaking operative treatment.

Another and a very curious feature in these pulsating

* Gaz. des Hôp., 1864, p. 171.
† See Mr. Haynes Walton's case, "Operative Surgery," 1863, p. 258.
‡ Archiv f. Ophthalmologie, 1869 (Iste Abth.), pp. 220, 229, 231, 234.

tumours of the orbit is the occasional transference of the symptoms from one side to the other. This was especially noticeable in a remarkable case under Velpeau's care, which will also be found in Dr. Delens's tract. It may be worth while, in connexion with this case, to quote a portion of Velpeau's commentary upon it, and upon another case of orbital aneurism under his observation at the same time.

"We have had two patients affected with erectile tumours of the orbit. One of these patients had a tumour in both orbits. He ascribed the origin of these tumours to a blow on the nape of the neck. I hardly see what connexion there could have been between the blow and the existence of the tumours. However this may be, the curious point about the patient was, that the compression of the right carotid caused the immediate cessation of the pulsation in the tumour of the left orbit, and that of the left carotid stopped the pulsation in the right orbit. This phenomenon appears inexplicable to me. I tied the right carotid: the left tumour subsided; that on the right side diminished a little, but soon appeared as large as before the ligature, and presented the same characters. I proposed to the patient the ligature of the left carotid, but he would not consent, and left the hospital, having obtained no other benefit than what resulted from the ligature of the right carotid. I saw this patient again a short time ago: the erectile tumour on the left side was perfectly cured, but that on the right side continued to grow The thing is hardly explicable, for the carotid has no an astomosis which could account for such a phenomenon. The second patient, who had an erectile tumour of the orbit on one side only, also attributed it to a blow on the nape. This coincidence of erectile tumours of the orbit with blows on the nape is a very singular thing. I content myself with recording the facts, without trying to explain them, for that I think would be very difficult, if not impossible."

Mr. Busk and Mr. Curling long ago solved Velpeau's first difficulty—namely, how to account for aneurism in the orbit (which he called erectile tumour, adopting Travers's opinion) following a blow on the head or nape, by referring it to a fracture of the base of the skull traversing the ophthalmic or internal carotid artery; and M. Nélaton's second case is an interesting anatomical proof of the correctness of their opinion. So that at the present day we are not surprised to find that the disease so often comes on after injury.

But the transference of the disease from one side to the other—the fact that the pulsation in one orbit is controlled by pressure on the other carotid—is far less easily accounted for. Several other cases are recorded besides Velpeau's. The phenomenon appears to me to depend on the coagulation of blood in the injured sinus, leading perhaps to dilatation of the channels by which it anastomoses with that of the opposite side, but the mechanism of it is hardly clear to my mind. Dr. Delens has put forward an elaborate hypothesis on the subject, which will be found in his pamphlet.

This examination of the pathology and of the various theories which have been adopted as to the nature of this remarkable disease is a necessary prelude to the precise subject of this lecture—namely, its surgical treatment.

If we admit that the symptoms may be caused by coagula in the sinus pressing upon the artery without any disease of the latter, surely we ought to do all in our power to avoid so serious an operation as the ligature of the common carotid artery.

If we admit, with Mr. Erichsen, that the disease, whatever be its nature, may probably enough disappear spontaneously, the same conclusion is irresistible.

If we agree in Dr. Delens's teaching, that a very large proportion of these cases are arterio-venous, we know that the ligature of the vascular trunk at a distance from the opening in the artery is a very uncertain remedy in arterio-venous aneurisms. We know also, from the experience of arterio-venous communication in the neck and elsewhere, that this injury does not necessarily involve any fatal symptoms. After attaining a certain extent, many such cases have remained stationary for an indefinite period.

If even we could adopt the old idea, that the tumour was due to a cirsoid dilatation of the arteries of the orbit, we know how nugatory the ligature of the trunk vessel usually proves in that disease.

Finally, if we adopt the opinion of Mr. Busk, Mr. Curling, and Mr. Nunneley, which is, I believe, the prevalent opinion at present, that these tumours are of the nature of true aneurism of the ophthalmic or internal carotid, I think we should reasonably expect success by milder methods than the ligature in a tumour so small as this must be, and in a disease the symptoms of which are confessedly due more to dilatation of the veins than to the arterial lesion. And the records of practice, I think, speak plainly to the same effect.

It is quite true that by the miscalled "statistical" way of viewing the subject the operation of tying the carotid for orbital aneurism is made to appear a very successful operation, because only a small proportion of the cases (about thirty-three in number hitherto*) have died. Out of Dr. Delens's thirty-three cases, however, only twenty-two are called successful, five being reckoned as "incompletely successful," one as unsuccessful, and five deaths. And it must be remembered that in all these tables, however carefully compiled, the proportion of successes is liable to be rated too highly, success having been prematurely claimed in cases which afterwards proved not to have been cured. Thus, in the instance before us, Herpin's case is reckoned as successful, although the disease recurred on the other side, and this recurrence is attributed by Dr. Delens to the direct effect of the disease for which the operation was performed, not to independent disease on the other side; and Van Buren's† is reckoned as a successful case, though it is probably the same patient as Mr. Poland saw some time afterwards—anything but cured.‡ However, allowing that, of the cases operated on, two-thirds were cured, one-sixth died, and the rest were only temporarily or not at all benefited, we can hardly use this as an argument for or against the treatment until we know the natural progress of the disease and the results of other kinds of treatment. Now, as to the former point, though Mr. France's, M. Collard's, and Mr. Erichsen's cases prove that in some instances there is no occasion for hurry and that a natural cure is not impossible, the same can hardly be affirmed generally. If the exophthalmus is rapidly increasing, the loss of motion of the eyeball advancing so as to threaten disintegration of the nerves traversing the cavernous sinus, and the loss of sight testifying to pressure on or stretching of the optic nerve, I cannot think that any good surgeon would refrain from active treatment. But I do not think the ligature of the carotid ought to be the first measure to occur to his mind. Compression of the artery, whether digital or instrumental, undoubtedly deserves the first trial in every case where the stoppage of the circulation through that vessel relieves the protrusion of the eye and suspends the bruit. Nor should the attempt be hastily abandoned. In Gioppi's case§ the first attempts at compression caused faintness, but it was persevered in, though it could only be borne for a minute or two at a time, being effected by the patient herself and the convalescents in the ward, and with the happiest results. The following are the heads of this case:—The patient was a woman (Maria O——) aged forty-two, who had been delivered of a child seventeen days previously. During the efforts of parturition she felt as if the eye had started out of the head. A drawing in THE LANCET of March 15th, 1862, shows the left eye protruded from the orbit and the lids everted. There was complete blindness and much distress from pulsatory noises in the head. An elastic aneurismal tumour was felt behind the eye. Compression of the common carotid very soon produced faintness; it was nevertheless employed, for a minute or two at a time, by the patient herself and by the convalescents in the ward. On the following day the force of the pulsation had diminished, and at the end of the fourth day all pulsation had ceased. The eye returned into the orbit and sight was restored.

The other successful case (referred to in the same paper) was under Scaramazza's care. The patient was also a middle-aged woman, and she was affected with dilatation of the heart and arch of the aorta. There had been acute pain in the left orbit and ear a few days previously after an attack of fever; the eye was perceived to be enlarged, and the sight was much impaired. On admission, the left eye projected beyond the orbit, and the cornea was dull. She could just discern light. There was pulsation and thrill

* These are the figures in Dr. Delens's book, which is the most recent and the most careful treatise I have yet seen.
† New York Journal, July, 1857, p. 49.
‡ Streatfeild's Ophthalmic Reports, 1859, p. 231.
§ Annales d'Oculistique, 1858, tome xl., p. 215.

over the left eye and temple. Digital compression was made on the carotid artery, for five minutes at a time, over the space of seventeen days: seven hours and twenty minutes in all. "The eye had then entirely re-entered the orbit, all pulsation had ceased, and the cure was complete."

Indirect compression has, it is true, been often tried unsuccessfully; but this is no valid argument against its use. The disease, whatever view further experience may lead us to take as to its probable event if left alone (a point on which I would be understood as speaking with great reserve), is certainly not dangerous to life—at least there is no record in any of the published cases of any symptoms indicating either pressure on the brain or a threatening of hæmorrhage. There is, therefore, ample time to accustom the patient to the use of compression. And the cases which I have cited above show how much may be done in this way: how a patient who is unable at first to bear the closure of the carotid circulation without instant faintness, or who cannot tolerate the pain of the pressure even for a minute or two, may by patience be educated into bearing the total compression of the carotid for several hours a day. Nor ought the fact to be overlooked that the compression of the lower part of the carotid stops the vertebral circulation also, and thus deprives the tumour of a powerful means of collateral circulation. I look forward, therefore, to the more careful and persevering use of digital compression of the carotid artery as a means of avoiding the danger to life which the ligature of the carotid involves.

Another method which has been practised in three cases, and twice at least with success, and which therefore deserves renewed trial, is the injection of coagulating fluids into the tumour. The two best known cases are Brainard's* and Bourguet's.† A third successful case, under M. Desormeaux's care, is referred to by Dr. Delens,‡ but I have not met with the *thèse* in which it is published. Eight drops of the solution of the perchloride of iron were first injected; and, a fortnight afterwards, twelve drops into a portion of the tumour which remained unsolidified. These cases, which are the only ones I have met with of the use of coagulating injections, afford much encouragement for the repetition of the practice in appropriate cases—meaning thereby cases in which the venous tumour is large, fully developed, and growing; and where the compression of the carotid has failed after a full trial.

The other local measure which has been tried is electro-puncture. Of this only two instances are on record, in one of which (Bourguet's) it failed, and in the other (Pétrequin's)§ it proved fatal.

The experience above recorded of the milder modes of treatment is very scanty, but the disease is a rare one. It justifies me, I think, in saying that the ligature of the carotid should never be used in orbital aneurism (so-called) until after a patient trial of the less dangerous measures just spoken of. But when these have failed, are we justified in proposing the ligature? I would answer in the affirmative. I have not as yet, it is true, been able to find a case in which the disease has been observed to run on to a fatal termination,‖ while there are several on record in which the patient has recovered spontaneously. Further, it is to be observed that the ligature of the carotid has not by any means universally exercised a curative effect. There are several cases in which the bruit has persisted after the ligature, and several in which the symptoms have not been relieved by the operation, or have recurred after an interval of relief. This will not surprise us if we regard the tumour as being in many cases not of the nature of true arterial aneurism at all, and if we remember the great ease with which the circulation must be restored in that portion of the internal carotid after the ligature of its main trunk. Yet, considering the distressing symptoms which this disease in some cases produces, the imminent loss of sight from the displacement of the globe and consequent stretching of the optic nerve, and the possibility of even graver consequences from the continued increase of the tumour, I think we must allow that the danger, and even the possible inutility, of the operation is not enough to outweigh the undoubted relief which it has often afforded.

Thus in Mr. Curling's case, and in that of Mr. Joseph Bell, of Edinburgh (*Edin. Med. Journal*, July, 1867), the patient had only one useful eye, and the sight of this was becoming rapidly lost from exposure of the protruding cornea. The carotid was very properly tied at once, and the patient's sight rapidly improved. The same may be said of an interesting case by Dr. Dudley, of Lexington, in the *Amer. Jour.*, Jan. 1843, p. 173, where the tumour had caused absorption of the bones of the head, if, indeed, the diagnosis in this case was accurate. But for the fact of the patient's speedy recovery, and good health half a year afterwards, one would have suspected that this was a case of fungous tumour. Its history and description are very unlike any others of orbital aneurism which I have met with.

So that in the graver and more obstinate cases of this affection I would not refuse to give the patient the chance of relief from the ligature of the carotid artery. But to apply this measure indiscriminately to all cases, in the way Mr. Nunneley recommends, is not compatible with what we now know about the pathology or the surgery of intra-orbital aneurism.

Some surgeons, as Demarquay, prefer the ligature of the internal to that of the common carotid, but I fail to see any reason for the preference. Nor do I see any object in tying the external along with the common carotid, as was done by Legouest.* The amount of anastomosis which the ophthalmic receives from the branches of the external carotid has never been found to interfere with the curative effects of the ligature of the common trunk.

ARTERIO-VENOUS ANEURISM IN THE NECK.

In connexion with carotid aneurism, and especially in connexion with orbital aneurism, it will be worth our while to mention cases of arterio-venous communication in the neck between the carotid arteries and the veins lying in contiguity with them or in their neighbourhood. We shall find—and I own that the fact, though it seems certain, is not to my mind very easy of explanation—that the lesion of such large vessels is very often harmless. The wound of much smaller vessels in the extremities (as in venesection) has often led to death, but the existence of traumatic arterio-venous aneurism in the neck, as far as published cases enable us to judge, does not usually prove fatal if let alone.

A preparation in the museum of St. Bartholomew's Hospital (ser. xiii., No. 121) shows the result of a punctured wound inflicted by the point of a pickaxe, establishing a communication between the external carotid artery and the internal jugular vein. A small fragment of iron was broken off from the point of the axe, and is seen embedded in the sheath of the pneumogastric nerve a little below the ganglion of the trunk, the neurilemma here being somewhat thickened. Corresponding to this bit of embedded iron there is a mark on the wall of the vein, showing the spot where it has perforated. On the opposite side of the vein is the orifice of communication with the external carotid artery. This orifice is surrounded by a small lump of indurated cellular tissue. The vein has been driven somewhat away from its companion artery, the internal carotid. The external carotid is much enlarged and tortuous from the point below where it is crossed by the hypoglossal nerve up to the part where it passes into the parotid gland. The weapon had obviously perforated the artery through the vein, and its point had fallen off as it was being withdrawn, the orifice of entrance into the vein having subsequently healed. This tallies with the fact of there being only a single puncture in the artery, and with the way in which the vein is lifted out of its course. The vein in this case is hardly at all dilated, nor is it flexuous. All the dilatation and elongation affect the artery below the wound. I presume the relative size of the vein and artery has caused the current in the former to overpower that in the latter, contrary to what is usually the case. The accident occurred twelve years before death, and does not seem to have given rise to any recorded symptoms.

An interesting collection of these cases has been published by Robert in his "Thèse des Anévrismes de la Region Sus-claviculaire." He has collected from various authors five cases of communication between the common carotid artery and the internal jugular vein. He describes a case

* THE LANCET, vol. ii. 1853, p. 162.
† Gaz. Méd., 1855, p. 772.
‡ Op. cit., p. 66.
§ Comptes Rendus de l'Acad. des Sc., 1845, t. xxi., p. 994.
‖ Guthrie, indeed, speaks of his case as "having proved fatal," but it does not appear whether he intends that the patient died of the disease or only that she was dead.

* Mém. de l'Acad. de Méd., tom. xxvii, 1867-8.

which he saw in the year 1832, in the person of an old soldier who had been wounded by a bullet in the wars of the Empire—therefore at least seventeen years before. The projectile had lodged apparently under the scapula, after having just grazed the clavicle. The man's health was perfect, except that he was troubled with a continuous buzzing or snoring noise, so loud that it could be heard at a distance of six inches from the neck. It extended over the axilla and side of the neck, and was accompanied of course by a strong thrill. The pulse in the arm was weak, and he said that he felt the cold more in that hand; but otherwise he had nothing to complain of.

It seemed probable in this case that the subclavian was the seat of the injury. In M. Larrey's well-known case the communication was also between the subclavian artery and its vein. But in all the other five cases given by Robert the carotid artery and the jugular vein appeared to have been wounded; although in none of them was any post-mortem examination obtained. Indeed, in none were there any formidable symptoms. All of them had been produced by sword-thrusts, and in one the symptoms had existed for twenty years; yet the patient was in perfect health, nor did the tumour increase even in the accesses of rage to which he was accustomed to yield.

The diagnosis rested in all these cases on the peculiar bruit and thrill, often very perceptible and annoying to the patient when he lay down. There was in most of them a tumour, formed apparently by the dilated vein, for in one case it disappeared altogether when the patient drew a long breath, returning gradually; and M. Robert speaks of dilatation of the whole venous system of that side of the head and face, though his notes do not particularise it in any of the cases. There was no evidence of any aneurismal tumour lying between the artery and veins in any of the cases, nor was there in any of them any alarming symptom which would have justified surgical interference. In one indeed there was at first very great ecchymosis and some amount of dyspnœa; in another (a young man wounded in a duel) extreme agitation and delirium, but bleeding and general treatment relieved these symptoms in both instances.

Somewhat resembling these cases is the one which is described by the late Mr. Porter,* in which a young girl had a "varicose aneurism" from a stab with a pair of scissors seven years previously. The disease affected the external jugular vein, and (as it was conjectured) the internal carotid artery. The swelling "became very large and prominent when pressure was made on the vein below it, so as to interrupt the current of blood, and it then became excessively painful, and exhibited the usual thrilling sensations both to the finger and ear; but when looked at from the mouth a strong and continued pulsation, together with considerable tumefaction, was obvious to every eye." "It was only matter of conjecture," says Mr. Porter, "that a communication had been established between the external jugular vein and the internal carotid artery, with the intermediate existence of a varicose aneurismal sac." No treatment was attempted, nor is anything said to show that the girl suffered any grave inconvenience from the disease.

The only case I have as yet found where, instead of a mere arterio-venous communication, there has been a distinct tumour—a varicose aneurism—as proved by dissection, is recorded in the *Gazette Médicale de Paris*, 1840, by M. Joret, and it will be noticed that the progress of the case was very different from those hitherto quoted—pain in the head, denoting probably venous congestion, being a marked symptom from the commencement, and being gradually succeeded by more definite symptoms of degeneration of the brain, slowly advancing to a fatal result from softening of the cerebral substance. The patient survived the injury (a bullet-wound) more than two years, and after death an aneurismal sac was found communicating with the internal carotid artery near the skull, and the internal jugular vein. The cerebral veins were dilated and the brain-substance softened. The patient had, from a very active man, become epileptic and idiotic before death.

The contrast between the sure, though slow, advance to a fatal termination in the case last quoted, and the harmlessness of those in which the arterio-venous communication has been uncomplicated by the development of an aneurismal sac, appears to correspond to what we know of the relative gravity of aneurismal varix and varicose aneurism in other regions of the body. The uselessness and impropriety of any interference in those cases of arterio-venous aneurisms in the neck where there are no dangerous symptoms hardly needs any demonstration. It is well stated by M. Robert. But there may be others, more analogous to Joret's case, in which the gradual advance of the symptoms points strongly to the necessity for some interference, if possible, before it is too late to save the patient's intellect or life. In such instances, if the foreign body which caused the wound is lodged, I see no alternative except to cut down on the tumour, open it with all imaginable precautions, having the circulation commanded below, and above also, if the position of the wound allows, and tie both the artery and the vein. The foreign body would of course be removed in the course of the operation. Had the tumour in M. Joret's case been more accessible, this course would doubtless have been recommended. In those cases where there is no evidence of lodgment of the foreign body, it is possible that the combination of direct with indirect pressure might be successfully employed, which Vanzetti has introduced in the treatment of varicose aneurism of the brachial. If the venous thrill and murmur could be suppressed by direct pressure on the tumour, it would be a proof that the venous orifice was controlled; and in that case simultaneous compression of the lower part of the artery might be trusted to complete the cure.

* Dublin Journal of the Medical Sciences, vol. xvii., 1840, p. 96.

OBSCURE ALLIANCES OF TYPHOID.

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IN THE LANCET of the 21st November, 1868, it was stated by the editor, in his review of my article on "Fever in Malta," published in the Army Medical Reports for 1866, that to complete our knowledge of the gastric remittent fever of the Mediterranean, we only wanted pathological information. In Barbadoes a fatal case of fever was treated by me which forcibly recalled to my mind the experience I had had in Malta, and the cases of fatal typhoid recently published in THE LANCET have revived in my mind the whole subject. It is very desirable that the nature of that obscure disease described by me as the "long" fever should be clearly established, and I believe the following case will help to elucidate the subject.

A young sailor of the Royal Navy was admitted into hospital at Barbadoes. A detailed account of his illness would be merely the repetition of a subject already exhausted by Dr. Marston, R.A., Dr. Chartres, 100th Regt., myself, and others who have observed and studied Mediterranean remittent, so similar was the sailor's case to that fever. I will therefore omit my notes up to the thirty-fourth day of his illness, the thirty-second of observation.

Thirty-fourth day.—Progressing favourably; tongue perfectly clean and moist; bowels regularly moved twice daily; he complains only of debility; temperature has been as high as 103·2° F. (evening of ninth day); abdomen as a rule has been hot and dry. I have not once satisfied myself as to the existence of any rose spots. The boy's age is nineteen. His tongue has never had the slightest appearance of the typhoid state, nor has he had typhoid dejections. His temperature for the past three mornings has been 99·2°, and under, but—significant fact—his evening temperature has not been below 100° since the commencement of his illness.

On this day he was to have had a little chicken, so well did he appear to be, and so anxious was he to have some; but the order I countermanded, and was assured that he did not get any. I am particular in recording this matter, because if he had got the chicken we could not have done otherwise than attribute to that solid food the untimely issue of the case. On the following morning his temperature was 103·8°, and on the following evening 104·2°. In two cases of fever I have seen an equally sudden and great elevation of temperature follow the ingestion of jelly.

Thirty-sixth day.—He has relapsed a second time (see diagram). He has not diarrhœa; tongue remains clean; he has not any pulmonary complication.

Thirty-seventh day.—As usual, no complaint.

Forty-second day.—With the exception of his temperature he appeared to be progressing favourably until 3 P.M., when he was seized with a sudden and most violent pain in the abdomen. At 5 P.M. his axillary temperature had risen

The upper line shows the 5 P.M. temperature; the lower shows the 9 A.M. temperature.

to 105·2°, pulse 120, and was in great agony; abdomen extremely tender. At 7 P.M. he was considerably relieved, having taken ninety drops of Battley's sedative solution.

I need not further detail the symptoms of peritonitis following perforation. He survived for no less than six days after that fatal event. The autopsy, made six hours after death, showed the peritoneum in a state of universal inflammation, in several places adherent; the cavity containing a quantity of sero-purulent fluid; the intestines healthy, with the exception of the lower portion of the ileum, where there was attenuation and superficial ulceration. One ulcer, having the area of a threepenny piece, had penetrated through the peritoneum, and here there was a scarlet peritonitis, from which, as a centre, the general inflammation extended.

Now, the indisputable facts are these: that in a tropical island I have had one case of fever under my care which so closely resembled that known as the gastric remittent of the Mediterranean that had it been under my care in Malta it would have been described as such; that the subject of this fever died about the fiftieth day of his illness from the effects of a perforating ulcer of the lower fifth of the ileum, and that I did not see any reason to doubt my diagnosis of the case as typhoid to be correct.

From my experience in Malta, I was led to a conclusion which I expressed in my paper on "Fever" in the Army Medical Reports for 1866—viz., that quinine might be banished from the island without much harm. Since that time I have had many opportunities of observing the nature and course of typical, malarial, periodic fevers, demonstratively amenable to quinine. Remarks on those cases were published in a medical publication on July 14th, 1869. I have also had the opportunity, during a residence of more than three years in the West Indian Islands, of observing a large number of cases of fever in their climate. I may, therefore, claim to be now in a better position to judge of the nature of the fevers I observed in Malta six years ago than I was then. And I cannot but conclude that if the *gastric remittent* is not the *typhoid* with which we are familiar in this country, it must be some variety of it; and, if this is the case, it illustrates the truth and the necessity of the warning given to us by the Professor of Military Medicine in the Army Medical School at Netley, whom I well remember cautioning us not to adopt the evil practice of calling fevers by local names. As to the fever being in any way malarial, I must still maintain the view I have hitherto held—viz., that it is not so in the slightest degree. And I now attach a greater force to the words of the editor of THE LANCET than I did when first I read them. His words were these:—"After reading Dr. Boileau's contribution ..... we confess to having strong doubts as to whether some of his cases were not in reality examples of enteric fever."

It follows that in the treatment of the long gastric remittent fever of the Mediterranean we must ever bear in mind the complications which may arise in *enteric* fever. We should not deceive ourselves by the idea that we have a fever to deal with which is amenable to quinine. We should be scrupulously careful in the administration of diet; and not fail to mark the temperature of the patient at least every evening, and by its indication to "govern ourselves accordingly." I need scarcely say that I fully endorse Dr. Latham's opinion, that it is only after the evening temperature has remained on at least two successive days below 99° F. that we can be sure the ulcers have healed, and that solid food may be given without risk. I may add that I do not remember ever having seen a relapse after such a condition.

As a result of many thousands of observations on the temperature of the white man in various climes, with shade temperatures as high as 105° F. and as low as 20° F. below zero, I have been led to the conclusion that the normal axillary temperature of the healthy adult is between 98° and 99° F.: in fact, it seems to me that this temperature is as valuable and as constant a characteristic of his human identity as is the structure of his bones. The fact may be already established; but as the idea that human temperature is one degree higher in the tropics than elsewhere has been widely entertained and supported by high authority, I here mention the fact that I have observed.

Templemore.

A CONTRIBUTION TO THE

SURGERY OF NATURAL AMPUTATION AND SPONTANEOUS FRACTURE.

BY WM. CURRAN, L.R.C.P.Ed., M.R.C.S.L., &c.,

ASSISTANT-SURGEON, ARMY STAFF.

(*Continued from p. 235.*)

AMONG the more specific, diathetic, or constitutional causes which lead to the degeneration here contemplated—for degeneration it must necessarily be—are lues veneres, struma, cancer, and scurvy, and of these cancer and syphilis are by far the most frequent causes. Whether that ill-defined or less understood condition called mollities ossium is due to, or in any way associated with either of these, it is not here necessary to inquire, but its causative influence is unquestionable, and, where it obtains, the whole skeleton is subjected to its agency. I have read of cases which would appear to be due to the long-continued pressure or disuse of a limb, and such mild growths as enchondroma, exostosis, &c., have been known to produce it. The convulsive struggles of epileptic, hydrophobic, or delirious patients have occasionally tended in the same direction, and one of the cases noted below was clearly due to the irritation of chloroform. But cases sometimes occur without any apparent reason, and for which it is not always possible to find an adequate explanation; for, as Mr. Paget observes, "to degenerate and die is as normal as to be developed and live. The expansion of growth and the full strength of manhood are not more natural than the decay and feebleness of timely old age: not more natural, because not more in accordance with constant laws, as observed in ordinary conditions. As the development of the whole being, and of every element of its tissue, is according to certain laws, so is the whole process regulated by which all that has life will, as of its own working, cease to live." Such is undoubtedly the case; and though bone is, for obvious reasons, less liable to the degenerative process than other more

vital or vascular portions of the human frame, still it is not exempt from decay; and fatty degeneration of bone is now a well-known cause of spontaneous and other forms of fracture. To illustrate this, and throw such light on the whole subject as the scanty materials at my command will allow, is the object of this paper; and I will subjoin in a separate table such details and cases as have come to my knowledge through the courtesy of friends or from other collateral sources.

And first as to the minuter pathology of this condition. There is very little doubt as to the cause of the lesion, when we find the natural medullary tissue of bone replaced or superseded by cancerous or other infiltration, or when there is wasting or degenerative atrophy of bone during the progress of any of the complications already enumerated. But when no such complication exists, and when instead of wasting we find hypertrophy of the medullary tissue, then we must look to the minuter structures for an explanation of the fact, or endeavour to account for it as we do for wasting of the kidney accompanied by undue adipose investment, on the same principle that in atrophy of that organ "a void is prevented by an increased deposition of fat." In either case there might be absorption of the cancellous structure, and thinning of the walls and enlargement of the calibre of the Haversian canals, such as is often observed in bones subjected to pressure, or which obstruct the growth of cystic, aneurismal, or other tumours. In his account of "absorption without enlargement, a consequence of peculiar excitement more or less diffused through the general structure of the large bones, tending to weaken their sides and render them liable to fracture from slight causes," Mr. Howship* says:—"This absorption of bone is the slow result of excitement upon the membranous sheaths of the longitudinal canals, and while these membranes deposit from their internal surface an increased quantity of medullary matter, they become absorbing surfaces externally, in consequence of which the canals are enlarged; and as this enlargement is progressive, the smooth surfaces of many of these canals are at last formed into one space, within which may still be preserved very distinctly the traces of those instruments by which the cavity has been produced." In that form of brittleness which is found associated with the general paralysis of the insane, fatty degeneration† takes a leading share, and the influence of cancer and scrofula can be equally traced in other instances of this complication. Mr. Curling,‡ in an able article on the subject of atrophy of bone, which will scarcely admit of abridgement, after describing two forms of this process, in one of which, in consequence of injury or obstruction, a bone may, without any evident alteration in external configuration, by a change affecting both hard and soft particles, be rendered smaller and of diminished weight, which he calls "concentric atrophy," while in the other, which he names "eccentric atrophy," there is "enlargement of the interior cavity, expansion of the cancelli, and thinning of the walls," sums up the general conclusion as follows:—"The bones as well as the soft structures fade and waste away when their activity is diminished or their functions suspended, or when they are deprived of their proper supply of nervous influence," and this is perhaps as much as can be said on the point in the absence of a fully recognised cause, and in the present state of our knowledge of the subject. The microscope has not, as far as I am aware, done as much to illustrate the question of osseous as of muscular degeneration, and chemistry is equally barren; and in endeavouring to account for the occurrence of this form of fracture in particular cases, it will be safer to generalise and ascribe the disorganisation that entailed it "to the development around or in the interior of the bones of the peculiar matter of the disease" with which it or the constitution generally has become affected.

CASE 1.—A feeble lad of strumous habit, the subject of an old-standing spinal irregularity or disorder, was admitted into a public hospital for a chronic abscess in the neighbourhood of the right hip, which extended down the thigh on its outer aspect, and gave rise to much suffering and exhaustion. As this caused extensive denudation and some caries of the bone, and indeed, besides, so much hectic and constitutional irritability to endanger his life, it was determined, on consultation, to amputate the limb near the great trochanter, and thereby afford him a better prospect of recovery. With this view, and in order to save him the pain of being removed in a state of consciousness to the operating theatre, chloroform was administered in the ward, and the usual precautions were taken against contingencies. After inhaling a few whiffs he began to struggle a little, when the femur gave way, near the seat of abscess, with an audible snap, and the leg hung loosely from the trunk. The operation was performed as if no such accident had occurred; and, on subsequently examining the bones, they were found to be honeycombed and carious. The abscess above referred to, coupled with the struma wherewith the system was so much impregnated, was doubtless at the bottom of the mischief whereby the fracture was caused.

CASE 2.—A labouring man, of ruddy complexion and sanguine temperament, came under my notice in parish practice several years ago with a fracture of the humerus of recent occurrence, which he said was caused by his attempting to throw a stone at a bird. He was sent to a hospital, and the arm was put up in splints in the usual way. On their removal, however, it was found that no union had taken place; and it fared no better under the use of a starched bandage and gutta-percha apparatus. In fact, all the usual expedients, including galvanism, subcutaneous scarification, and "pegging," failed equally with the former to produce union; and the exhibition of cod-liver oil, phosphoric acid, lime, and other "ossifiers" and alteratives, had no better effect. He was under observation for a year or more with the same negative result; and his was the only case of the kind in which—there being no history of syphilis or other constitutional taint—the fracture remained ununited.

I have seen two cases in which the clavicle remained ununited after having undergone a second or third fracture, but in neither was there any history of syphilis, and I have never myself come across any instance of a fracture which could be said to be due to the influence of this poison in the constitution generally, or in the bones in particular. In this belief I am borne out by Lancereaux, who says:—"But Swediaur, and several other authors of equal note, utterly deny the existence of syphilitic osteomalacia. We share the opinion of Swediaur, and believe like him that there is no well-authenticated case to prove the actual existence of syphilitic softening of bones." As to the so-called "modification" of certain portions of the osseous tissue, whereby a fracture may result in them "from the slightest violence," he says: "But this fracture, whatever may be its seat, whether the patella, the clavicle, or the femur, is rather the effect of an entirely local change—of a gummy tumour, for instance—than of a general modification of the osseous system, such as osteomalacia. We do not admit, therefore, that syphilis can produce any other softening of the bones than that which may be the consequence of one of the changes described above." And as to the alleged influence of syphilis in retarding the union of a fractured bone, Mr. Callender, who appears to have devoted considerable attention to the subject, distinctly denies it. His words are:—"It has been said that patients tainted with syphilis occasionally fail to unite a bone. A great number so affected are under treatment in our wards, but I never heard of any such showing delay in mending a fracture." (See Lancereaux's "Treatise on Syphilis," New Sydenham Society's translation, vol. i., pp. 243-4, and Transactions of the Medical and Chirurgical Society of London, vol. xli., p. 147.)

CASE 3.—For the particulars of this case I am indebted to the courtesy of Staff Surgeon-Major Dr. Macintosh, now retired, who dictated them to me at Agra in 1865, and who kindly gave me permission to use them in any way I might prefer or require. J. B——, aged twenty-three, a soldier in the 21st Regiment, of strong, powerful build, and florid complexion—an athlete, in fact—sustained a fracture of the right humerus while competing for the hundred-yard throwing cricket-ball prize at Bellary, Madras Presidency.

* See Observations on the Morbid Structure of Bone, by John Howship, Esq., in the Medico-Chirurgical Transactions of London, vol. viii., part 1, pages 57-76.

† Dr. J. Thompson Dickson, describing "brittle bones from a case of general paralysis," says: "The rib bones were almost surrounded with fat, and were nearly as brittle as captain's biscuit"; and he justly adds that "fatty and brittle bones are very common in general paralysis." See Transactions of the Pathological Society of London, vol. xxi., p. 329.

‡ See an article on Atrophy of Bone, by T. B. Curling, Esq., in the Medico-Chirurgical Transactions of London, vol. xx., pages 338-372.

He delivered the ball, but, finding his arm powerless, he walked to hospital, and was found, on examination there, to have suffered a comminuted fracture of the humerus, which separated the condyles, and extended into the joint. The forearm could be moved in any direction, and there was no material disfigurement or tumefaction. Reduction was easily effected; and, the parts having been put up in a hinge splint at an angle of forty-eight degrees, he made a good recovery. Anchylosis, however, took place, and he had to be indulged for several successive months as a clerk, &c., before he could undertake any other military duty.

CASE 4.—J. G——, aged twenty-seven, of temperate habits, who suffered a good deal from syphilitic rheumatism in England, and was greatly debilitated by fever in India, came under my notice in the hills under the following circumstances. While assisting, in obedience to orders to that effect, to take a prisoner to the guard-room, the latter (who was at the time the worse for liquor) seized him by the arm and endeavoured to shake him off and effect his own escape. In this he was but too successful, for, under the pressure thus applied, poor J. G——'s arm snapped asunder like the shank of a clay pipe—as he himself not inappropriately described it,—and fell powerless by his side. The fracture was put up in the usual way, and united firmly within six weeks. He was subsequently invalided for anæmia and lost sight of; and I fear he will ever retain the impress of his old ailment—syphilis,—and with it a liability to casualties of the kind here contemplated.

CASE 5.—No. 764 Private J. C——, 26th Regiment, aged twenty-five, had a chancre for the first time in 1866 and seven or eight times subsequently; in fact, "affliction" may fairly be said "to be wedded to his parts," and he bears the brand of syphilis indelibly on his brow. When seen by me, he was thin, sickly-looking, and covered over the trunk with coppery blotches; he spoke harshly through the nose, and the throat was everywhere inflamed and ulcerated. He gave me the following account of his accident. While in the plains, and very much debilitated by fever and diarrhœa, he noticed a swelling—I could not determine whether it was a node or an exostosis—on the right humerus, about its middle or rather lower down, within two and a half or three inches of the joint, which was very painful and tender, and caused him a good deal of distress. Having been subsequently sent to the hills for benefit of change, and being very irritable and despondent at the time, he lost his temper with a beggar who importuned him for alms at Umballa, and to drive him away he "shied"—to use his own words—a piece of bread at him; in doing so the arm gave way in the place already indicated, and the limb fell helpless and deformed by his side. The fracture was put up in camp, and united fairly in six weeks or thereabouts, but the arm remained weak and incapable of much effort, and there was a considerable amount of thickening and enlargement near the seat of the original injury. He died of ulcerative syphilis and exhaustion before I left Kussowlee, and the following analysis—which was most kindly performed for me by Professor Cameron, the distinguished chemist and sanitarian of Dublin—will show that we must look elsewhere than to chemistry for an explanation of the cause of this complication. "A hundred parts" of the bone in question "contain—

"Water	10·04
Gelatine, fat, vessels, &c.	51·14
Tricalcic phosphate	35·47
Magnesic phosphate	1·03
Calcic carbonate	1·28
Alkaline salts, chiefly sodic chloride ...	1·04
	100·00"

Dr. Cameron adds: "The above figures show that there is nothing peculiar in the chemical composition of the bone; therefore its brittleness must be due to a physical cause. The portion of the bone adjacent to the united fracture is remarkably light, and presents quite a honeycombed appearance, resembling bones in certain syphilitic affections; other portions of the bone are normal in appearance, and of the ordinary density."

In a subsequent communication with which this gentleman has favoured me, he says: "Curious to say, the sound portion of the bone does not, as far as the relative amount of organic and mineral matter is concerned, differ very sensibly from the diseased part. Here is the analysis of the former:—

"Water	10·13
Combustible matter	50·06
Mineral matter	39·81
	100·00"

And Professor Smith, whose authority on such a question will not be disputed, kindly informs me that the bone here referred to "affords a well-marked example of venereal caries." He adds that he has seen "numerous instances of spontaneous fractures from fragilitas, internal necrosis, scurvy, and rickets"; and that "all united as soon as in healthy bone."

(To be concluded.)

A CASE OF EPILEPTIC CONVULSIONS DURING LABOUR.

BY MATTHEW BLOXAM, M.R.C.S., L.S.A., &c.

ANY variation from the usual phenomena of parturition is so full of interest to the obstetrician that perhaps the following case may be considered so much so as to be worthy of record.

E. S——, aged nineteen, of fair complexion. Said never to have had a day's illness till the present moment, being pregnant for the first time. She was taken in labour on Friday evening, March 7th, 1873.

When examined about nine o'clock, the skin all over the body was peculiarly harsh and dry, though quite free from heat or fever; pulse regular; tongue clean; no head symptoms; urine had just been passed; pains regular; and a peculiar very deep-coloured rusty-brown-black ring around each nipple.

On examination per vaginam, the head was well down in the pelvis (which seemed to be rather over than under the usual standard), and covered by the uterus. The os uteri would not admit the finger during a pain, but in the interval it relaxed to about the extent of a sixpence. The membranes had given way, liquor amnii escaping freely. Head presenting in first position. At the vaginal orifice could be felt what was at first thought to be a thick fold of vaginal mucous membrane, with which it was continuous, as it then seemed, on the right side, but free on the left, and attached above to the symphysis pubis beneath the urethra, and below lost on the posterior wall of the vagina. It was subsequently found that this thick band was attached only by each end—at the upper part just below the urethra, and below to the posterior wall of the vagina, and rather to the right of the median line.

On Saturday, March 8th, I was called in haste at 7 A.M. Was told the patient had just recovered from an hysterical attack. She was making great complaint of the severity of the pains, being quite conscious, and was with great difficulty induced to keep anything like quiet, or remain in bed. On examination the head was well down in the cavity of the pelvis, and labour going on rapidly. In a few moments the patient was attacked with a very severe fit of epilepsy in which she became very livid, and seemed about to die from suffocation. Cold water was freely applied, and the patient soon recovered, becoming perfectly conscious, and at the same time so very unmanageable that she was obliged to be held by myself and attendants to keep her in bed. The convulsions being repeated, it became evident the sooner she was delivered the better; and it being quite impossible to effect this unassisted, owing to the violent struggles of the patient, I asked my brother, Dr. Bloxam, of Mount-street, to oblige me with his advice and assistance. He, having examined the case, thought that it would be better not to give chloroform if it could be avoided, and having carefully made out the attachments of the band before mentioned, determined to remove it, as it not only prevented the descent of the child's head, but so narrowed the vagina that to introduce the forceps was impossible, and even if that could be effected, to extract the head without laceration of the soft parts was out of the question. While the attendants and myself held the patient down on the bed in the necessary position, my brother applied a

carbolised catgut ligature to the upper end of the band, just below the urethra, and to the lower, well within the vagina, and cut out the intervening portion. The patient was no sooner replaced in bed than she had another very severe convulsion, and as soon as it had passed off, and while in a state of stupor, Dr. Bloxam rapidly applied the forceps, while the patient was kept from any unexpected movement by myself and the attendants, and she was delivered of a live female infant. The placenta followed in due course, without the least hæmorrhage.

The convulsions continued frequently after delivery, the patient now being quite unconscious during the intervals, with a very rapid pulse, hot skin, and congested face. Cold was applied to the head, and twenty grains of hydrate of chloral given for a dose, to be repeated in two hours if the convulsions again took place. This still being the case up till five o'clock in the afternoon, a powder of eight grains of calomel and two drops of croton oil was given; and fifteen grains of chloral with twenty grains of bromide of potassium in a tablespoonful of water every hour till the fits no longer occurred. When seen again, about nine in the evening, the powder had not operated. The patient quite unconscious; pulse too rapid to count, but firm and full; convulsions rather less frequent. Bromide mixture to be continued. At eleven another convulsion took place, during which a small clot had been passed from the uterus. An enema of castor-oil and turpentine was now given, and the patient left for the night. To continue the bromide mixture.

March 9th, 10 A.M.—No convulsion since 11 o'clock the previous night. Enema operated well, the bowels also being moved several times during the day. Patient in an insensible state, but with great difficulty could be made to put out the tongue. Pulse too rapid to count.

From this time the patient continued slowly to improve; the pulse, however, remained at 130 up till Friday, March 15th, when it fell to 96 per minute, at which rate it still remains. The wounds in the vagina have nearly healed. No convulsions.

In conclusion, let me draw attention to the treatment of this case. First, chloroform was not given on account of the congested state induced by the severity of the epileptic attacks. Secondly, bearing in mind the late Dr. Tanner's views of these attacks during labour, opium was equally to be avoided, none having been given from first to last; and though he says that bromide of potassium is the only drug that can do good in the way of medicine, it seems to me the hydrate of chloral is a valuable remedy under such circumstances, and particularly if combined with the bromide. Thirdly, the diet consisted of large quantities of milk, yelks of eggs, beef-tea, jelly, &c., no wine or spirit having been given.

The sudden termination of the convulsions on the expulsion of the small clot from the uterus must not be forgotten, nor the fact that, though the catheter was duly passed during the first few days, but very little urine was ever found in the bladder. The urine was passed into the bed, and the quantity in the course of a day or two became very large; it now being passed in the usual manner.

The patient was the victim of seduction, and had undergone great mental anxiety. The infant has been brought up by hand from its birth, and with her mother continues to improve daily. From Friday evening till Saturday night the patient had in all twenty fits of epilepsy.

Duke-street, Grosvenor-square, W.

EFFECT OF CARBOLIC ACID ON THE URINE.

BY W. A. PATCHETT,

SENIOR RESIDENT MEDICAL OFFICER, WORKHOUSE HOSPITAL, MANCHESTER.

IN THE LANCET of April 12th, a letter appeared by Mr. James Nicholls, F.R.C.S., calling attention to a peculiar discolouration of the urine which he had observed after the external use of carbolic acid to a raw surface, and asking whether others had observed the same phenomenon, and if it was a constant sequel to the external application of the acid, and what was its probable cause?

During the past eight or twelve months I have myself repeatedly noticed that carbolic acid lotion (of the strength of 1 to 40) applied externally to a raw surface has, in from four to forty-eight hours, produced a blackish or dark olive-green discolouration of the urine. The urine looks exactly like an infusion of mint or the colour produced by the addition of a little iron to a vegetable infusion, as of tea or digitalis. This discolouration does not occur with any regularity or constancy. Contrary to the experience of Mr. Nicholls, I have often seen the urine discoloured by the internal use of carbolic acid; but unless given in poisonous doses the colour is not so deep as that produced by the external application of the acid. The discolouration appears to occur in healthy individuals only when the acid is applied over a considerable extent of raw surface; but in several cases where the patients have been suffering from Bright's disease, the application of the acid to a comparatively small ulcer—e.g., size of a florin-piece—has been followed by the blackish-green discoloured urine. On the contrary, in a case of extensive scald where the whole front of the chest presented a healthy granulating surface, to which the carbolic acid was applied constantly for weeks, no discolouration or alteration of the urine whatever was produced. And in another case the discolouration of the urine was intermittent, although the acid was kept constantly applied to the raw surface. It would seem that the urine is more easily and quickly discoloured by the outward application of the acid, and without the occurrence of any unpleasant symptoms or inconvenience to the patient than by its internal administration. In only a few of a number of cases, where a weak solution of the acid applied externally produced a deep-olive colour of the urine, was any discolouration produced by the internal use of the acid. In two cases of chronic Bright's disease with small superficial ulcers of the legs to which the carbolic lotion was applied, the urine (in both cases) on the second day was of the dark-green colour. Carbolic acid given internally in three-grain, increased to six-grain, doses, three times daily for a week, until, toxic symptoms—as oppression of the head, epigastric pain, and vomiting—appearing, the acid had to be discontinued, produced no change in the colour of the urine of the one, but in the other the urine was of the characteristic olive-green colour. In the cases of three women poisoned at Crumpsall Workhouse, in 1871, by taking carbolic acid instead of cough mixture, I remember that the urine found in the bladder after death was of a blackish-green colour, and the blood of a majenta colour. Except in colour, the urine does not differ from ordinary urine. The cause of the peculiar colouration is not exactly known; it has been attributed to the action of the carbolic acid upon the colouring matter of the urine, but the colouration is not by any means constant after the free application of the acid externally or its administration internally, and no change in the urine is made by the addition of carbolic acid, unless the urine contains albumen, which the acid coagulates. How is a case like the following to be explained? After an amputation of the thigh, the stump was dressed with carbolic acid dressings. On the second day the urine was of a dark-green smoky colour, and contained a copious deposit of lithates. The discolouration remained for three days, and then suddenly vanished, reappearing the next day, and then again disappearing. Strangely, the peculiar colour reappeared and disappeared alternately for about fourteen days, when it finally disappeared, although the carbolic acid was kept applied uninterruptedly. In several cases of severe erysipelas of the head and face the application of carbolised oil has produced dark-coloured urine.

Manchester.

HISTORY OF A SCROFULOUS FAMILY.

BY JAMES W. ALLAN.

THE following very brief jottings are the result, partly of personal observation, partly of careful inquiry. The study of this history seems interesting from a clinical point of view, as illustrating the various forms in which constitutional taint may manifest itself.

"A" and "B"—brothers.

"A" is a very delicate-looking man, about middle life, with a pinched, waxy face, and symptoms which point

pretty clearly to degeneration of the liver. The man's wife is a delicate-looking woman, who suffers from leucorrhœa and others signs of debility. One of their children,

"*A*," a feeble, emaciated little boy, with an enlarged abdomen, is under treatment for chronic pneumonia of the right lung.

I have been unable to ascertain anything trustworthy about

"B," the brother of "A." He married a phthisical woman (she died afterwards of consumption), and the following is an account of their offspring:—

"*B*," a married daughter, looks delicate, but does not suffer from any pronounced form of disease, so far as I am aware.

"*C*," a lame lad; very bad case of morbus coxæ.

"*D*" died of "consumption" in early manhood.

"*E*" died of "consumption" in early womanhood.

"*F*," a rather delicate young woman.

"*G*," a delicate young man, who takes cod-liver oil.

But, as already stated, "*B*" is married. Her husband is not robust, but he gets credit for being "healthy." One of the children of this couple,

"*B* 2," a pretty little girl, died of tubercular meningitis. She had pulmonary symptoms, but they were not prominent. For some time before her death she complained of pain in the knee, and began to walk lamely. Pretty plain indications of incipient morbus coxæ in her case.

Another of their children,

"*B* 3," an infant, suffers from severe strumous ophthalmia.

Belford Hospital, Fort William.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

TWO CASES OF RODENT CANCER.

(Under the care of Mr. HUTCHINSON.)

THE true nature of rodent ulcer is even yet a *quæstio vexata*, it being according to some authorities a variety of lupus, to others a cancerous affection, and to others a special disease called a fibroid ulceration; but although it possesses certain peculiarities of lupus and cancer, it differs from both, and has a mode of origin, progress, and termination specially its own. The greatest point of difference between rodent ulcer and cancer is that the former is rarely ever accompanied by any implication of the neighbouring lymphatic glands, and is never fatal by secondary infection. Some few cases have, however, been observed in which there was with the rodent ulcer an indurated enlargement of the adjoining absorbents; but in these cases the enlargement either subsequently subsided, or the glands gradually softened and evacuated themselves by a spurious kind of suppuration. Recent experience has shown, moreover, that this disease, which was once regarded as invariably fatal, may not only be checked, but actually arrested in its progress, and that much may be done by plastic operations to relieve the distressing deformity that frequently results from the ravages of the growth.

Very large rodent ulcer affecting the cheek, temple, orbit, and side of the nose, of about twenty-five years' duration; no gland disease.—The patient, Robert F——, is a strongly built labouring man, aged fifty-four; he is now pale and weak from the repeated hæmorrhages which have occurred from an immense surface of ulcerating rodent cancer. The ulcer covers the left temple, the upper part of the cheek, the whole orbit (the eye having been lost for twenty years and reduced to a mere stump), eyebrows, and side of the nose, and communicates with the cavity of the nose. On admission, its surface presented many large boggy masses of fungating tissue, which bled profusely on the slightest provocation; there was also a moderate quantity of discharge from the surface. The edge in many parts was hard, raised, beaded or knotty, and quite characteristic of rodent deposit. When first seen, in June 1872, a small part at the inner side had cicatrised in an imperfect manner, still leaving patches of deposit here and there. About six months later he again came under care, much reduced by the bleeding, and Mr. Hutchinson took him in; and after his health had improved somewhat under generous diet the actual cautery was twice applied, with an interval of about three weeks, and with the result of much diminishing the hæmorrhage, which had before been very troublesome. The cautery was used with great freedom, and large masses were burnt away. The disease had not made any great progress between June, when he was first seen, and December, when the first cauterisation was performed; but the bleeding had increased, and much reduced the man's health. There have never been any enlarged glands. The ulcer started from a wound on the face made by a pickaxe twenty-five years ago; the wound never healed, and gradually on its seat a "lump" formed, which afterwards ulcerated, spread to the orbit, and destroyed the eye.

In connexion with the bleeding from the ulcer, it may be mentioned that twice before he had bled largely; one summer in boyhood his nose bled so freely that the blood used to run down his shirt, &c.; and again, when he had a cut on the ala of his nose (not the one from which the ulcer started), the bleeding had to be stopped by some styptic application (from his account it was probably perchloride of iron).

Very large superficial rodent ulcer; a large part of its surface cicatrised; no gland disease.—Eliza P——, aged fifty-six, but looking older, and now in a feeble state from pain and soreness of the ulcerated surface, is suffering from a very extensive rodent ulcer covering her left shoulder and side of neck, extending downwards in front over the clavicle and upper part of the chest, and backwards over the upper part of the scapular region, and to the middle line of the back of the neck. Over a patch at the upper and hindermost part (back of neck) about as large as a man's palm, the ulceration has extended through the skin and subcutaneous structures, but everywhere else its action has been strictly limited to the superficial layers of the true skin. The deeply ulcerated part is now, and has for several years been, an open sore, varying in size from time to time, and now larger than ever before; the remaining and far larger portion of the ulcerated surface has, however, cicatrised almost as fast as the cancerous deposit has broken down and ulcerated, so that within the hard, beaded, sinuous edge, characteristic of rodent ulcer, comes, not a large ulcerated surface, but a narrow, shallow ditch of ulceration succeeded immediately by a thin scar. The patient has been under the care of various members of the surgical staff as an out-patient, and under Mr. Hutchinson's care at the Hospital for Skin Diseases during the last three or four years, and has had a great many and various local applications. The disease has been kept more or less in check, but has still made steady progress. The patient says that it began thirty-three years ago as a small oval spot on the shoulder, and spread very gradually so that when it first ulcerated, which did not occur till five or six years ago, it was no larger than a two-shilling piece. Since then it has spread much more rapidly. There is no history of cancer in the family, nor is there any evidence or history of syphilis in the patient or her children. None of her relations have died of consumption.

The very superficial character of the ulceration over the larger part of the affected area in this case, as well as its great tendency to form scars, are features in which this case bears some resemblance to lupus; but the character of the spreading border—a hard, sinuous, slightly beaded line of pale opaque deposit, not a number of separate orange-red translucent tubercles, as in lupus—marks the case at once as belonging to the rodent cancer group.

It will be observed that in both these cases the cicatrisation occurred in the parts where the skin is naturally thin and but loosely attached to the deeper structures, as is the case at the side of the root of the nose and on the lower part of the neck and upper part of the chest. The same thing has been noticed in another case now under Mr.

Hutchinson's care at the Ophthalmic Hospital. The patient is a woman of about forty-five, and suffers from a very large rodent ulcer of the skin of her right temple, eyebrow, and outer part of cheek. Here again the diseased surface has cicatrised over a large part of the temple, where the skin is comparatively thin and loose, while on the eyebrow and cheek, where the skin is thicker, it has eaten more deeply and has not healed.

ST. BARTHOLOMEW'S HOSPITAL, CHATHAM.

COMPOUND COMMINUTED FRACTURE OF BOTH LEGS; FRACTURE OF THE SKULL; AMPUTATION OF RIGHT THIGH AND LEFT LEG; RECOVERY.

(Under the care of Mr. A. W. NANKIVELL.)

IN the following case the injuries were most extensive and the subsequent shock great, but notwithstanding this, the patient's health bore up, and recovery was as rapid and as perfect as could be reasonably desired. The case illustrates very well the amount of injury from which a human being may, when placed in moderately good hygienic conditions, survive and recover.

T. B——, aged twenty-six, admitted Feb. 12th, 1873. The patient, a shunter at Chatham Station, was run over by the slip coach of a down express. On admission it was found that the bones of the right leg were smashed into many pieces, the skin-wounds extending posteriorly as high as the popliteal space, anteriorly to within two inches and a half of the patella. The left foot and lower third of the left leg were also completely disorganised. There was also a fracture of about an inch in length of the external plate of the frontal bone.

The right thigh was amputated just above the condyles of the femur by a long anterior and short posterior flap, the patella being dissected out. The left leg was removed at the lower part of the middle third by antero-posterior flaps. Carbolised catgut was used for the ligatures. The man bore the double amputation remarkably well, and soon recovered from the effects of the chloroform.

Feb. 14th.—The anterior flap of the left stump threatens to become gangrenous. Poultices ordered.

24th.—The anterior flap has sloughed away. The right stump is perfectly healthy. Carbolic-acid lotion (1 in 40) applied to stumps.

March 2nd.—Scalp wound healed.

8th.—A small portion of the tibia is denuded of pericosteum.

31st.—Necrosed bone removed from end of tibia.

April 10th.—Stumps healing rapidly.

29th.—Patient was lifted into a chair and carried about the ward.

May 30th.—Since last report the patient has been progressing favourably; has been of late taking daily exercise in the grounds. Discharged to-day, only a small ulcer of the left stump remaining unhealed.

Remarks.—This case well illustrates the severe injuries that the sharp edge of a railway tire is capable of producing when a limb gets between it and the iron rail. The man was standing in the four foot-way when knocked down, and the fracture of the skull was probably produced by the heavy slip coupling hitting him as the carriage passed over him. When admitted the patient seemed almost in a hopeless condition, but, thanks to a vigorous constitution, he recovered without a bad symptom.

LIVERPOOL WORKHOUSE HOSPITAL.

ACUTE INFLAMMATION OF THE SPLEEN; ABSCESS; PERITONITIS; DEATH.

(Under the care of Dr. WM. ALEXANDER.)

THE following case is interesting on account of the rare occurrence of the disease in this country, as well as on account of the obscurity of the symptoms and the difficulty of diagnosis in this particular case.

P. R——, aged twenty-five, was admitted on the evening of the 26th of May complaining of slight pain and tenderness over the left hypochondriac region, of slight hæmoptysis, and of general *malaise*. The appetite was fair; bowels constipated; temperature 100·5° F.; pulse 88. Stethoscopic examination of his chest showed the presence of dry bronchitic râles. Ordered tannic acid mixture for the hæmoptysis and some aperient medicine.

May 31st.—Temperature 100° F.; pulse 84; pain less; appetite fair.

June 2nd.—Bowels still costive; fever increased. Ordered a castor-oil enema, which acted soon after, and from which the patient expressed himself much relieved. During the evening the fever increased suddenly, and symptoms of acute peritonitis set in, to which the patient succumbed the following day.

Previous history.—A fortnight before admission he arrived here from America, where, for the last year, he had lived a most drunken and irregular life. He had an attack of intermittent fever some months ago, from which, he says, he fully recovered. Since his arrival in Liverpool he had been drinking heavily, until the advent of his present illness compelled him to desist.

The autopsy was performed twenty-four hours after death. Body well nourished; dark coffee-coloured matter oozing from the mouth and nose. On opening the abdomen evidence of general peritonitis in the shape of lymph and pus appeared; these inflammatory products radiated from the splenic region as a focus over the entire peritoneum. The spleen was adherent to the diaphragm, covered by false membranes, and bathed in pus. On attempting to lift it out the capsule was ruptured. The splenic substance was softened, studded with minute abscesses, and its bulk very slightly increased. Part of the capsule adhered to the diaphragm, at which spot a tolerably large abscess had formed. The other organs of the body were healthy, with the exception of the base of the left lung, which was partially consolidated, showing that pneumonia had just commenced.

MANCHESTER ROYAL INFIRMARY.

INTRA-THORACIC ANEURISM TREATED BY ELECTROLYSIS.

(Under the care of Dr. BROWNE.)

THE treatment of intra-thoracic aneurism has always been regarded as one of the great difficulties of surgery, but a more exact knowledge of the nature of the healing processes is gradually removing many of the obstacles to success, and operative measures are now had recourse to for the cure of cases which were formerly left to the care of nature. Whether electrolysis will ever become a common method of treatment of intra-thoracic aneurism remains to be seen; but hitherto the results, although varied, have on the whole been sufficiently good to justify the continuance and even an extension of its use.

William M——, aged thirty-three, a gardener, of fair complexion and healthy appearance, was admitted on the 26th of October, 1872, when the following notes were taken by Mr. A. Cosgrave:—"Has led a rather temperate life, but never refused a glass of spirits when it came in his way; has been a smoker since he was eighteen, generally consuming two or three ounces of twist per week. He has worked in all sorts of weather, both in greenhouses and out of doors; has been wet to the skin, sometimes two or three times during the same day. Seven or eight weeks ago he first noticed a swelling in the right side of his breast, but it did not inconvenience him till ten days since, when it began to be painful, and he thought it was time to see about it. The pain was sharp, shooting up into his neck and shoulder."

On examination, a pulsating and expanding tumour was seen over the second and third costal cartilages on the right side of the sternum; the size was about that of a small orange. A very distinct double shock on auscultation. It was more easy when in the upright position than when lying down; therefore he was allowed to sit up by day, and to have a bed-rest at night. A support of thick sole leather, padded, also relieved him somewhat. He was ordered ten grains of iodide of potassium in infusion of quassia, three times a day.

On Oct. 31st it is reported that he attended the consultation, and thinks that the swelling is larger since. It is equal to half a moderate-sized fist. The pain is of a

gnawing character, and passes from the shoulder to the right elbow. Pulse 120, equal on both sides. To be allowed to chew tobacco, as it eases dizziness in the head.

On Nov. 15th galvano-puncture was performed by Mr. Heath according to the electrolytic method recommended by Dr. Althaus. The negative needle was inserted in a valvular manner into the right side of the tumour, and the sponge placed on the healthy skin just beyond the tumour on the opposite side. Stohrer's battery, made by Weiss, was used. Three cells were employed first, but they caused no pain, although the current readily produced the blue iodide of starch; in five minutes after, six cells, and nine cells in another five minutes. The patient then (but only when asked) said there was a new pain, and pointed to the right clavicle, two inches from the acromion process. When fifteen cells were used the pain became sharper, and the operation was brought to a close by withdrawing the needle and dressing with collodion. The pulse kept about 108 throughout, but became more feeble; the pulsation in the tumour was perceptibly diminished in force. The permission to chew tobacco was now withdrawn. The pain from the operation wore away, but in the night he was troubled with a pain shooting up in front of the right ear, which was altogether new.

On Nov. 18th the tumour is reported to be "firmer to the touch, with diminished pulsation. The transverse measurement was 5½ inches, and the vertical 4½ inches. The operation was repeated a second and a third time, in the same manner, and each time to the patient's satisfaction.

On the 29th the transverse measurement was 5½ inches, and the vertical 4½ inches. The patient had no more pain in any posture, and was made an out-patient at his own request about Christmas, being strictly enjoined to keep perfectly quiet in body and mind. He came twice this year to report himself, and said that he had returned to light work, as grafting, since complete idleness was irksome to him. On the last visit the measurements were 5 inches by 4. He had continued the iodide of potassium mixture.

MUTTRA CITY HOSPITAL, N.W. PROVINCES, INDIA.

LITHOTOMY; UNUSUALLY QUICK RECOVERY WITHOUT SUPPURATION OF THE WOUND.

(Under the care of Assist.-Surg. A. BAIRD SEAMAN, Civil Surgeon of Muttra.)

THE LANCET of the 3rd of May contained an account of a rapid recovery after lithotomy in a boy aged thirteen years and a half, who was operated on in Charing-cross Hospital. In this case the urine passed through the urethra two days after the operation, and the wound healed up within a week. Such satisfactory results, it seems, are not uncommonly obtained with children in India.

The following case, which has recently occurred in the surgical practice of this hospital, is extraordinary by reason of the advanced age of the patient, the rapid exit of the urine through the urethra after the operation, and the entire absence of any suppuration.

May 17th.—Meer Khan, a Mahommedan tailor, aged fifty-five, but looking much older, was admitted suffering with symptoms of stone. He was sounded and the presence of a calculus proved.

20th.—The usual lateral operation was performed. No difficulty was experienced. A lithic-acid calculus, weighing exactly an ounce, was quickly removed.

21st.—The urine came through the wound during the day after the operation. He slept well during the night, and no urine escaped either through the wound or through the penis. This morning he has passed all the urine through the natural channel.

22nd.—He continues to pass urine through the urethra, none at all coming through the wound. The sides of the wound have united up to about a quarter of an inch from the margin of the skin.

24th.—The wound has healed up. There is nothing to be seen but the line of incision united at its edges. The man says he is quite well, and wishes to go home. He was, however, not allowed to do so.

30th.—No unfavourable symptom of any kind appearing, he was discharged.

In this case no urine passed through the wound after the first twelve hours succeeding the operation, and the incision healed without any suppuration whatever; in fact, four days after he was cut the man was quite well.

Reviews and Notices of Books.

A System of Midwifery, including the Diseases of Pregnancy and the Puerperal State. By WILLIAM LEISHMAN, M.D. pp. 835. Glasgow: Maclehose.

IT is long—we can hardly say how long—since a new systematic treatise on Midwifery appeared in this country; and this is one of a most complete and exhaustive character. We have gone carefully through it, and there is no subject in obstetrics which has not been considered well and fully. The result is a work that is not only admirable as a text-book, but valuable also as a work of reference to the practitioner in the various emergencies of obstetric practice.

Beginning with the pelvis itself, the author evidently believes that some slight mobility is permitted between the several pelvic bones, and that, too, to an extent which might facilitate delivery. We are inclined to question this opinion, at least as a matter of common occurrence. In some rare and exceptional cases such mobility may perhaps occur, but it is, we think, more than doubtful if it ever happens in the normal state of things.

The account of the anatomy and physiology of the organs of generation is full and complete, rather more so perhaps than is necessary in a work of this kind, and would be more in place in a treatise on the diseases of those organs. Faults of excess are, however, much more venial than those of deficiency, and we are bound to say that this is the characteristic of the work throughout. The chapters on what we may term the physiology of gestation are also sound and practical. In regard to the *vexata quæstio* as to the duration of pregnancy, our author admits the possibility of the 280 days being exceeded, but he seems indisposed to allow of more than 300 days. And, on the subject of superfœtation, he thinks that the evidence in favour of this occurrence is very strong, if it be limited to the period when the decidua reflexa comes into contact with the decidua vera.

We are sorry to find that Dr. Leishman condemns emphatically the operation of gastrotomy in cases of extra-uterine pregnancy when pregnancy has advanced to the full period of gestation. We think he can hardly be aware of the records of cases—now a considerable number—in which both mother and child have been saved by this proceeding. His condemnation of the operation seems due to his dread of the fearful and almost necessarily fatal hæmorrhage that ensues on the attempt to remove the placenta; but then the practice of allowing this to remain and to come away afterwards, if at all, has been demonstrated again and again as not only practicable, but as the only safe method of treatment.

One of the most carefully-written chapters in the whole work is that on the mechanism of labour. This is a subject upon which Dr. Leishman had previously bestowed great attention—it is, in fact, one peculiarly his own, for he has undoubtedly advanced our knowledge regarding the process by which the child presents at the pelvic brim and is propelled down the canal in the several cranial positions. He has carefully described also the mechanism of labour in other presentations, including those of the face and breech, of which latter he mentions four varieties, giving special and full directions for the management of these, in all of which we cordially concur.

Another topic of the highest importance is uterine hæmorrhage; and, considering the practical character of this treatise, the author has certainly placed before his readers a *résumé* of the subject which leaves little to be desired. We could have wished, however, that he had given his own views in regard to the best method of treating cases of placenta prævia somewhat more decidedly. It is difficult to tell what mode of treatment he most prefers, though he seems to speak more in favour of turning than anything else. The same uncertainty, or rather indefiniteness, characterises his estimate of Barnes's mode of treating cases of post-partum hæmorrhage—viz., by the intra-uterine injection of the perchloride of iron. We should have been glad of Dr. Leishman's experience on this matter, for the plan in question has lately been attacked very severely, and there can be no doubt, we suppose, that very serious and even fatal consequences have followed directly upon this practice. At the same time, it is undoubtedly a most valuable agent, though its employment requires extreme care, and we certainly cannot agree with those who hold that the treatment is unscientific and wrong.

If we were disposed to find more fault with the author, it would be for his too great willingness to yield to the opinions of others, instead of boldly declaring his own. This amiable weakness is exhibited very frequently throughout the work. As another illustration, we may say that in regard to the limits of pelvic deformity which would justify resorting to either the perforator or the Cæsarean section there is the same uncertainty, and preference seems to be given to quoting the opinions of other authorities rather than giving dogmatically his own. It would seem that he is in favour of a mutilating operation in cases where the pelvic conjugate diameter does not exceed an inch and a half. We are satisfied that this is an error, and that, if we could collect some statistics of the cases where extraction *per vias naturales* is effected or attempted with a pelvic deformity of this extent, the maternal mortality would fully equal that which occurs in cases of Cæsarean section,—and of course all the children are sacrificed.

In the next edition, which we doubt not will speedily be called for, we hope Dr. Leishman will give us in fuller detail his own experiences and opinions on these and other important points; he will thereby enhance the value of the work as a practical guide to the accoucheur in the many difficulties that occur, and he will certainly not diminish its value as a text-book for the student. Take it all in all, we have little hesitation in saying that it is, in our judgment, the best English work on the subject. There are, however, two rather serious drawbacks to it to which we may refer—namely, its size and price, and the latter is far more serious than the former; still we cannot say that there is not money's worth. The concluding chapters on the Diseases of the Puerperal State are ample, and the treatment recommended is in the main judicious. Lastly, it may be added that there is a capital index.

Hays' American Journal of the Medical Sciences. No. CXXXI. New Series. July, 1873. Philadelphia: Henry C. Lea.

THIS, if not the best, is one of the best-conducted medical quarterlies in the English language, and the present number is not by any means inferior to its predecessors. The reviews and abstracts are well done, and there are some original papers of decided merit. So much interest attaches to the subject of epidemic cholera at the present time that we may direct the attention of epidemiologists to a paper on Epidemic Cholera in South America, by Enrique M. Estrazulas, M.D., late resident of the Cholera Hospital, Monte Video, Uruguay, which was an inaugural essay for the degree of M.D. in the University of Pennsylvania to which the Alumni prize was awarded in March, 1873. The author enters upon an examination of the facts connected with the occurrence of epidemic cholera in Paraguay in relation to the doctrine generally held, that cholera can never be produced *de novo*. Dr. Estrazulas summarises these facts as follows:—Cholera was unknown in Paraguay and La Plata previous to 1866. Before the armies were stationed at Estero Bellico no case had occurred, and after the removal of the troops the disease totally disappeared. No vessels from infected ports arrived at La Plata or Paraguay in 1866. As cholera did not exist at any Brazilian port or city at the time, troops coming from Brazil could not have brought the disease with them. Cholera appeared first in Paraguay, and, following the course of the rivers, infected in its downward march all the cities on its banks. The Paraguayan army, where the disease first appeared, was secluded from the rest of the world and completely blockaded by land and water. The disease remained endemic for three years in Paraguay. The combination of causes offered a striking analogy to those presented in India, and such a combination has never, the author alleges, been reproduced except in Paraguay.

ANNUAL REPORT OF THE LOCAL GOVERNMENT BOARD OF IRELAND.

THE first Annual Report under the "Local Government Board (Ireland) Act," late "Poor-Law Commission," has just been issued, and affords very interesting information as to the condition and health of the poorer classes in that country, as well as to the medical system in connexion with the Poor Law, which has now nearly a quarter of a century's existence to commend it to our approbation as to its beneficent results.

The Report is divided under two heads, the first being connected with poor relief and expenditure, whilst the latter is connected with relief under the Medical Charities or Dispensaries Act.

Under the first heading it will be merely necessary to direct attention to the amount of, and expenditure upon, relief afforded by the Irish workhouses for the year 1872. During that period 232,000 persons were relieved in workhouses, at a cost of £400,000, or less than £2 per head; 63,000 persons obtained out-door relief, at a cost of £80,000, or something over £1 per head, of which £62,000 was in money, £8,000 in kind, and £10,000 for orphans and deserted children. Of the persons relieved in the workhouses, 97,000 were treated in the workhouse hospitals; of these 15,000 were for zymotic diseases, 79,000 for other diseases, and 3000 for accidental injuries. With regard to night lodgers, or "casuals," which afford such a pregnant cause of complaint in England, it is probable that the absence of charitable institutions in Ireland has reduced itinerant and professional pauperism to a minimum; and in consequence the average number of night lodgers in workhouses at the close of each week during the year was under two for each of the 163 workhouses, the highest number for any week being 345. It must be borne in mind that last year was an exceptionally hard year for the poor in Ireland; it was more than usually destructive to the potato crop; the continued wetness of the season interfered with the saving of the turf throughout those parts of the country in which it is the only fuel employed, while in towns and other places accustomed to the use of coal the price of the latter was doubled. In addition, the cost of almost every necessary of life, especially food of every description, had become dearer, so much so that the cost of maintenance in the workhouses, irrespective of clothing, increased by one-fourth. Notwithstanding all these difficulties, the expenditure on poor relief was but £729,331, or or 1*s.* 1½*d.* poundage of expenditure on the valuation of Ireland, estimated to be £13,329,354.

The second part of the Report is devoted to the consideration of the returns in connexion with relief under the Medi-

cal Charities Act, or dispensary system, and is, as usual, very complete. We will premise our observations under this head by stating that the whole of Ireland, both urban and rural, is mapped out into dispensary districts, each district being attended to by a dispensary medical officer, and, when necessary, by an apothecary and midwife as well. Each dispensary physician is *ex officio* the public vaccinator of his district, and the registrar of births, deaths, and marriages also. Perhaps the best method of conveying an idea of the Irish Poor-law medical relief system would be to give a short abstract of the Dispensary Tables for Ireland, as furnished by the Report. The population of Ireland may be taken as 5 millions, the area 20¼ millions, and the valuation £13,250,000. It is divided into 163 unions, which are subdivided into 700 dispensary districts, with 800 medical officers, each dispensary district averaging 50 square miles in extent, or 7 miles square, having an average population of from 7000 to 8000 persons, residing in from 1500 to 2000 houses. It must be borne in mind that, with the exception of Dublin, Belfast, and Cork, there is no city in Ireland possessing a population of even 100,000 inhabitants. There are but 5 towns with a population over 20,000, and but 6 others with a population over 10,000. In fact, whilst one half of the population of England and Wales reside in cities, but one-seventh of the population of Ireland reside in large towns. Nevertheless, owing to a peculiar distribution of the land for Poor-law rating purposes into electoral divisions, made some thirty years ago, the people are huddled together in a vast number of villages with populations of from 1500 to 3000 inhabitants each, without the slightest attempt at any sanitary arrangements either for drainage or water-supply, the Poor-law expenditure under sanitary Acts being for the whole of Ireland under £6500 for the year 1872. Under these circumstances it is not surprising that nearly 800,000 persons were attended during the year by the dispensary physicians, and that a quarter of a million of these persons were visited at their own homes. Close upon 35,000 of these were cases of zymotic disease—as fever, small-pox, and scarlatina. Under the head of small-pox the increase in the number of cases during the last three years—that is, since the introduction of the last epidemic—is remarkable, for whilst in 1870 but 50 cases of small-pox came under the notice of the dispensary physicians in 1872, nearly 11,000 cases were treated by them; whilst in 1870 there were but 32 deaths from small-pox registered in Ireland. In 1872 there were over 3000 deaths registered as due to that disease. This epidemic, as might be expected, also had its effect on vaccination, for whilst in 1870 a little over 140,000 persons were vaccinated by dispensary physicians, in 1872 nearly 283,000 persons were vaccinated by them; but as 140,000 of these were persons over 8 years of age, the great bulk of this number in all probability were cases of revaccination.

The total of the medical charities' expenditure for the year 1872, under all heads—medicines and medical appliances, rent of dispensary buildings, salaries of medical officers, vaccination fees, and other expenses—was £141,648, being an average poundage on the valuation of 2¼d. The average cost of each dispensary is estimated at £197 a year, which is principally made up by the following items: for medicines and medical appliances, £33; salary of medical officer, £100; rent, £11; vaccination expenses, £20; fuel, attendance, and incidental expenses, £15. The average number of cases attended by each dispensary medical officer in the year was 1000, of which 300 were cases requiring domiciliary visits.

The total expenditure on medicines and medical appliances for both workhouses and dispensaries was for the year £33,000; for medical salaries of both workhouse and dispensary physicians £99,000, making a total of £132,000. Half of this sum, or £66,000, is, however, paid by Parliamentary grant. Fifteen medical officers of dispensary districts were superannuated during the year under the Poor-law Medical Officers' Superannuation Act, the superannuated officers being in every case disabled by advanced age or permanent ill-health from the efficient performance of their duties. In eleven of the fifteen cases the guardians awarded the highest superannuation permitted by the law.

The total disbursement of poor-rates for all purposes—viz., relief, medical relief, burial grounds, registration of births, deaths, and marriages, and sanitary measures—was for the year £394,888, or 1s. 4d. in the pound on the valuation. This expenditure will bear favourable comparison with that of England and Scotland.

The Report is very lucid, and evidently compiled with great care, and will be found to be well worth examination by those interested in the relationship that exists between sickness and pauperism, and the advantages accruing from an efficient medical service in connexion with the Poor-law system.

THE OUTBREAK OF TYPHOID FEVER IN MARYLEBONE.

DR. WHITMORE, the medical officer of health for the parish, informs us that in answer to the letter which was inserted in our columns a fortnight since, and the circulars which he sent to the practitioners in his district asking for information as to typhoid fever, &c., he has, up to this time, received 150 answers, from which and from other sources, he learns that 200 cases of typhoid have occurred in 80 families. Seeing, however, that typhoid is a disease which not unfrequently runs a very mild course, and that the outbreak occurred just as many of the principal families in the affected parishes were departing for their country houses, it is not impossible, indeed it is highly probable, that the number of cases very greatly exceeds that stated above. A gentleman writes from a place near Dolgelly, in North Wales, to say that he had occupied a house in the parish of Marylebone during the summer, and had patronised the unfortunate dairy. Since his return home, in the latter half of July, two of his servants have been attacked with typhoid, and one of them has since died. A medical man writes from a rural place in Kent to say that a lady, lately resident in Marylebone and a patroness of the dairy, is suffering from typhoid. Similar cases are heard of also in Hornsey, Battersea, and other of the metropolitan suburbs. Such cases must be common, and when one reflects that every case sent into the country is capable of being the centre of infection for another epidemic, one is aghast at the power for mischief which one obscure farm in Buckinghamshire is capable of exercising in these days of rapid locomotion.

In our report last week we inadvertently employed the present tense instead of the past in one or two instances, and thus failed to do justice to the action of the dairy company, which was prompt enough after the presence of typhoid on one of their farms had been demonstrated to them. The only valid excuse which they have put forward for their tardiness in taking effective steps to investigate the matter is the fact that, in answer to inquiries as to the state of health on their various farms, they had received "the most satisfactory replies." It is curious that even after the detection of the case of typhoid on the farm, the milk company should still continue in what seems to us the most unwise course of throwing every doubt on the evidence which has been brought against them. In a letter written by their secretary, bearing date August 13th, twenty-four hours after the discovery of the source of infection, occurs the following passage:—"We have, of course, not only stopped the distribution from that particular farm, but we have stopped its being sent to London, although it still appears to be only a case of suspected typhoid, according to our latest advices; but assuming that, instead of being a case of suspected typhoid, it is, or becomes, a case of admitted typhoid, *we still fail to see that this amounts to anything approaching to proof* [the italics are our own] that the milk has been contaminated, whereas it is a fact that the natural drainage of all that district is into the river Thame, which, again, runs into the Thames above Reading. Consequently, it is almost certain that some typhoid evacuations must have found their way from any cases on or near the farm of Chilton Grove into the water distributed by the West Middlesex and Grand Junction Companies; and if the information given to us is corroborated, that cases of typhoid have occurred within the last few months in Oxford and Reading, it then becomes a matter of certainty that the Thames water has been contaminated by the poison, and this would be so much easier a way of accounting for the present outbreak that it would

require very strong proof to establish the fact that it was the milk and not the water." Again, after stating that two cases of typhoid in the Cavendish-square district have been traced, the one to Vienna and the other to Belgium, they say:—"The continual infection of the sewers by these two cases during a considerable period might well account for some others, for persons crossing a street near a sewer ventilator *only too often inadvertently inhale stinking gas, which, of course, at any given moment, might carry with it the germs of the disease.*"

The reason why they took so little notice of the letter which was addressed to them by Sir William Jenner and Dr. Murchison was the fact that the said letter, which bore date of Saturday, 9th, was unavoidably not delivered till Monday, 11th; and they took this slight delay as evidence that the matter was of small importance. Again, because an erroneous impression was abroad that some of their milk was derived from a sewage farm, which is not the case, they, therefore, thought themselves justified in coming to the conclusion that the impression as to the poisonous nature of their milk must be erroneous also. Finally, they say that, regarding themselves in the light of a prisoner, "who is considered innocent until he is proved guilty, so the directors have considered that the only course of action at so early a stage as the receipt of the first letter was to continue to consider the milk innocent until something more in the nature of proof were laid before them." We think it is to be regretted that the directors have upon this occasion shown such a preference for winged words over divine actions. It is difficult to know what amount of proof they would consider necessary in this instance. We are not aware that it has been proved that typhoid poison has ever been made to pass unchanged through the filter beds of a water company, or that it has ever been inhaled through the ventilator of a sewer, and yet the directors show a strange preference for the improbable in this instance, and, with very little hesitation, cast an imputation on the water of two large companies. To every unprejudiced person the case must seem painfully clear, and the amount of doubt remaining on the subject has been reduced almost to the vanishing point. The milk company are about to establish a regular system of medical supervision of their farms, and we are sure that for the future no steps which can secure the safety of their customers will be neglected. We trust that this epidemic will be a warning to them as to the manner in which they ought to receive friendly advice when tendered to them upon any future occasion.

It is much to be regretted that such a quantity of irrelevant matter has found its way into the daily papers *apropos* of this milk epidemic. There seems to be a vague idea abroad that the poison has originated *de novo* in the milk, and that it is all attributable to sewage farms. We need hardly say that there is no evidence to show that the typhoid poison originates *de novo* in milk, and very little likelihood that such can possibly be the case. In this milk epidemic, as in the previous ones, it has been shown that the contamination of the milk has been effected by water which has itself been contaminated with typhoid poison, owing to the accidental leakage of a drain or privy into the well whence it was drawn. The milk is merely the *disseminator* and not the *generator* of the poison, but the occurrence of so many epidemics makes it probable that milk, under certain conditions of temperature, is possibly the soil most suitable for the growth of the typhoid germ or zyme? How did the water get into the milk? is the question most frequently asked, and which is answered by the knowing ones merely by a look of cunning, and by the cautious one by asserting that the mere washing of the cans with the impure water is sufficient to account for it. And so, indeed, it is, for it is quite conceivable that an infinitesimal amount of water *might* contaminate an almost infinite amount of milk. Dr. Ballard's case at Islington occurred, as this has done, during the hot weather of July and August, and it was a common observation then, as it has been now, that the milk has shown itself very prone to become *putrid*, and not merely sour. Dr. Ballard went to the trouble of ascertaining the names and addresses of the entire *clientèle* of his dairyman, and found as a result, that out of 142 families supplied from the dairy, typhoid had occurred in 70 of them.

The statement which has appeared that the epidemic is of a mild type is, we regret to say, not borne out by facts. The deaths have not been, as far as we can learn, below the average, and many of the cases have been unusually severe. There are good grounds for believing that the milk epidemic commenced quite in the early spring, but it was not till the hot weather of the last two months that its severity became sufficient to attract attention. That the milk has acted as the disseminator of the poison is not the only charge against it. Milk, as is well known, forms the chief and often the sole article of diet for typhoid patients, and it could only be supposed by some of our homœopathic brethren that to feed a typhoid patient on typhoid-contaminated milk could be followed by any but the most disastrous results. We have learnt that the Rev. Mr. Butler, whose melancholy death was mentioned in the leading article of *The Times* on Thursday, was fed during his illness upon the milk of the Dairy Company, and we have heard also of a little boy who died as long ago as March of perforation of the bowel following typhoid, who was likewise fed upon the suspected milk. The father of this lad is, we hear, at present ill with typhoid fever.

THE ASHANTEE WAR.

WAR is costly at any time, and small wars are disproportionately so. In that in which we are now engaged it will be better to waste money than to waste lives, and to waste time is to waste both money and lives. To carry out an expedition successfully in a climate like that of the West Coast of Africa requires that it should be done expeditiously and thoroughly, once for all. The causes of the war are intelligible enough. The Ashantees hunger and thirst for Elmina as a seaport. The inhabitants of that place more or less openly sympathise with our enemies The Fantees—revolted subjects of the Ashantees—had, moreover, been insulting the Ashantee king.

As everybody knows, the climate, bad enough in itself, has been rendered abominable by the absence of all regard for cleanliness on the part of the inhabitants. Few white men can live there five years, and not many survive three; consequently, everything has been carried on with an eye to economy and reduction. Only black troops have ever been stationed there, and their number has become fewer and fewer every year. The station, visibly doomed to be abandoned, has little in the way of barracks, hospitals, and stores to be turned to account, and the officials, so many pluralists without any special qualifications for their posts, have found themselves of late greatly over-worked.

Captain Glover has already sailed for Cape Coast, and it is understood that he is to organise a force and proceed up the Volta river, but this expedition can scarcely start before November. It is well known that the conduct of the forthcoming operations against the Ashantees is to be entrusted to Sir Garnet Wolseley, and it is allowed on all hands that no better selection could possibly have been made. If we may judge from the skill and energy with which he managed the Red River Expedition, it is highly probable that he will adopt a similar plan on the present occasion, and endeavour, by a rapidly executed expedition, to penetrate into the interior as far as Coomassie, by following the course of a river like the Dah or Pra, when he will endeavour to inflict a heavy blow at Ashantee power and *prestige* by destroying their chief city. To do this he will probably require, as a nucleus, a small compact European force, and if the obstacles to health do not prove insuperable, we may feel perfectly confident as to the success of such an undertaking from a military point of view. Let their fanatical bravery be what it may, the Ashantees will speedily recoil before a European force armed with breech-loaders and some light mountain guns. It is scarcely likely that such an expedition could start with safety to health much before December. We know nothing of the climatic conditions of the interior of the country. It is quite possible that, as in the case of Abyssinia, the low-lying coast-line once passed, the main sources of malaria and the dangers to health will have been surmounted. But, under any circumstances, everything will depend upon the rapidity with which such an expedition can be carried out.

It is clear that the dangers to health cannot be greater further inwards in the Ashantee country than they are in the Protectorate itself, and we think that, notwithstanding the risk, the best course would be to execute some such programme as that indicated. As far as medical and sanitary experience and skill are concerned, Sir Garnet will be ably seconded by the medical officers accompanying the expedition. Dr. Home, V.C., in addition to great and varied military experience, has had the advantage of supplementing his knowledge of field service by the information he acquired whilst attached to the Local Government Board of this country. His enterprise and pluck are well known, and have been already tried; and he will be ably seconded by the great local knowledge of Surgeon-Majors Rowe and Waters. We regret to learn that Dr. Home's progress so far has been attended by some unhappy occurrences to himself. We are informed that since his arrival in Africa, during one of those fearful squalls termed tornadoes, a window blew out, cutting and seriously injuring his hand. Subsequently he suffered shipwreck; the steamer that conveyed him ran on a reef in the night. The passengers and crew had to be landed in a boat, and with his wounded hand in splints he had great difficulty in getting into the boat, having been drenched like a mop as he dangled over the ship's side. The boat, a heavy cutter with a load of people on board, was with great difficulty got to the shore by the aid of three oars in a heavy sea. Half-dressed, drenched, and shivering, the unfortunate officer was landed at a Sierra Leone swamp, where he contracted dysentery, of the symptoms of which, however, we are glad to hear he was recovering. After the attack in the vicinity of Elmina, the Ashantees buried 300 bodies, and the number of their wounded must have been great. The Ashantees, like sensible savages, are believed to pay their generals by results, and the unsuccessful leader on that occasion is said to have been relegated somewhere for decapitation. Large quantities of quinine, with other medical and surgical stores and disinfectants, have been forwarded to Africa by the medical service, and very ample supplies of vaccine lymph to protect the troops against the epidemic of small-pox which has been, and still is, raging among the natives. It is understood that means for condensing water for drinking purposes have also been furnished by the Admiralty. If we are rightly informed, there is no lack of disposition on the part of medical officers to volunteer for service on the West Coast of Africa, notwithstanding the notoriously unhealthy nature of its climate, and the arduous character of the duties they may expect to discharge on active service there.

Foreign Gleanings.

PHYSIOLOGICAL ACTION OF SALTS OF SILVER SUBCUTANEOUSLY INJECTED.

In the last number of the *Archives de Physiologie*, Prof. Rouget, of Montpellier, has recorded the results of various interesting experiments which he has made, with the object of stating the physiological effects of salts of silver administered in injections under the skin. The experiments were conducted on birds, eels, lizards, frogs, dogs, rabbits, &c., and the results thereof are summed up thus by the author:—In all my experiments the salts were introduced by absorption; symptoms of intoxication always manifested themselves later than with injections into the bloodvessels. I never observed any case of immediate death even in a dog into whose subcutaneous cellular tissue I had injected sixty centigrammes (about twelve grains) of hyposulphite of silver. On the other hand, two centigrammes (about one-third of a grain) of the same salt, absorbed through the same channel, are perfectly well borne by a dog without the slightest evidence of *malaise*; whereas the same dose injected into the veins of a dog by MM. Rabuteau and Mourier brought on fatal intoxication in twenty minutes. Whatever may be the apparent variety of phenomena determined in various kinds of animals, by solutions of salts of silver introduced into the organism by subcutaneous absorption, those phenomena are always the direct consequence of intoxication of the elements of the encephalo-rachidian centres, complicated in some cases by intoxication of the muscular elements of animal life. The blood which carries into the tissues the toxic substance received through absorption, does not seem to be altered in its elementary constitution or its normal properties.

DR. KLEBS ON TUBERCULOSIS.

Dr. Klebs has been carrying on a series of experiments on tuberculosis, which he has recorded in one of the recent numbers of the *Archiv für Experim. Pathologie* (Heft ii., 1873). The author asserts that the milk of tubercular cows brings on tuberculosis in various animals. The affection generally commences with intestinal catarrh, followed by tuberculisation of the mesenteric ganglia, the liver, and spleen, and ending in extensive miliary tuberculosis of the thoracic organs. Infection by means of the milk may be without result in vigorous organisms; and the author has even seen full-formed tubercles resorb and disappear through cicatrisation. It is likely, adds Dr. Klebs, that the tubercular virus is contained in varying proportions in the milk of cows which are more or less diseased, and that scrofulosis may occur in children born without tubercle through the milk of an unhealthy mother or wet-nurse. In conclusion, the author expresses the view that the virus is contained in the serum of milk, in a dissolved state, and that it is not destroyed by boiling, which is ordinarily insufficient.

A WAX CANDLE IN THE BLADDER OF A FEMALE.

This interesting case was observed a short time ago at the Hôtel Dieu, of Paris. The patient on admission complained of intense pain in the abdomen. The urethra, abnormally dilated, easily allowed of the introduction of a finger into the bladder, where there was felt a hard, voluminous body, obviously the cause of the intense pain. The woman then mentioned that, on account of great difficulty in making water, she had passed a candle through the urethra, and had let it fall accidentally in the bladder. Through the extraordinary dilatation of the urethra, pincers were easily passed through the canal, and after some efforts the candle was caught by the wick and drawn out through the urethra. The end of the candle (which had been rounded with a knife) was seen to be covered with calcareous matter, which had gathered there during the five weeks which the candle had stayed in the bladder. A few days after the extraction the woman left the hospital perfectly recovered.

FOREIGN BODY OF THE ŒSOPHAGUS THROWN UP SPONTANEOUSLY.

This case was recently communicated by Dr. Baraffio to the Medical Society of Florence. A soldier in a lunatic asylum swallowed a spoon of middling size. The medical man called in could nowhere find traces of the spoon. A short time after a sharp attack of dyspnœa supervened, and at the same time tumefaction was observed above the sternum. On the fit of dyspnœa subsiding there occurred a violent fit of coughing, during which the spoon was expelled. The author explains the case thus: The spoon had gradually got down the œsophagus, producing dyspnœa through compression of the bronchi. It then reached the cardia, and there excited reflex movements of vomiting, so that it never entered the stomach.

CURABILITY OF PULMONARY PHTHISIS.

An article, published by Dr. R. Massini, of Basle, in *Deutsch Arch. für Klin. Med.* (H. 3 and 4, 1873), contains the following remarks on the above subject, the results of the author's personal experience:—In pulmonary phthisis two-thirds of the fatal cases belong to cheesy pneumonia, and in only one-third of cases is tubercle to be found. It is impossible in our present state of knowledge to assert that miliary tubercle is curable. It is shown by the results of post-mortem examinations (discovery of cicatrices in the apices of the lungs) that cheesy pneumonia, when not complicated by tubercle, can be cured. Pulmonary phthisis, adds Dr. Massini, is frequently a consequence of abdominal typhus, and at Basle mortality through typhus has considerably diminished since the decrease of cases of abdominal typhus.

THE LANCET.

LONDON: SATURDAY, AUGUST 23, 1873.

THE *forte* of the meetings of the British Medical Association is in its Addresses. August days are too hot for practitioners who have stolen away from their busy and anxious duties for a few days' recreation to go into much detail or discussion. What they want is to see and hear as many as possible of the men whose names they regard as a guarantee of light in the dark ways through which Medicine has to go before it can acquire that certainty which is more easily attained in sciences less complicated. *The Times* said that one of the arguments used by the unsuccessful applicants for reception at the Mansion House was that they had come hundreds of miles to be present on that particular occasion. We do not underrate the attraction of the Mansion House; but we still venture to believe that the chief attraction which drew so many hundreds of the profession to London was the prospect of seeing and hearing so many of the men whose names are as household words in the profession, and to whom practitioners have been accustomed to look for guidance and for fresh knowledge, and have seldom looked in vain. Doubtless there was also the feeling that, as London was to be the place of meeting, the very heads of the profession would be the hosts of the Association. Still we believe that the prospect of hearing FERGUSSON and PARKES and SANDERSON and WOOD, to say nothing of VIRCHOW and other continental magnates of medicine, was the principal power that brought such a great body of practitioners to London. And none that came with this prospect will have returned empty.

Practitioners of medicine will feel all the better for listening for an hour to the Address in Medicine by Dr. PARKES. It may not be exactly the kind of address they expected; it may have been a shade more pathological and two or three shades less therapeutical than they could have wished. But, nevertheless, it was a stately and withal modest exposition of the progress of medicine in the last forty, or rather thirty-seven, years, and of the discoveries by which it has assumed more and more the character of a true science and an efficient art. It is by the more or less clear perception of the significance of the points of discovery indicated by Dr. PARKES that we distinguish the enlightened practitioner from the mere medicine dealer. The days are gone by when medical men could gather together as mere apothecaries and discuss simply the action of rhubarb or tartar emetic, though the days should soon come when medical men will be able to compare notes more accurately than heretofore as to the resources and utility of medicine as a healing art.

Dr. PARKES is of opinion that no advance in medicine in this century has equalled those made in the first quarter of it by BRIGHT in the recognition of albuminuria, and by LAENNEC in the application of the ear for the purpose of diagnosis in disease of the chest. The one was certainly a grand step in pathology, as the other was in diagnosis. The two discoveries stand high, Dr. PARKES thinks, above all that has followed or is even likely to follow. This is high praise, but not, we fear, too high. A little reflection will show the justice of it. The discovery of BRIGHT was almost the beginning of the scientific study of processes of degeneration, which since that time have held such a conspicuous part in medical consideration. It is scarcely too much to say now that we think more of degeneration than of disease. Acute disease, apart from the specific fevers or septicæmic states, is comparatively rare. The older physicians thought differently of disease. They thought of it as something in the blood that could be bled out or purged out. We think of it as largely resident in the textures, from which it cannot be dislodged by any amount of phlebotomy or catharsis. Undoubtedly the beginning of this revolution in our notions of disease was made by the splendid work of Dr. BRIGHT. If medicine is to control the duration of life, it must chiefly do so by controlling slow processes of degeneration in tissues. And here it may be frankly admitted that medicine has of late years been as much taken up with tissues as with treatment. But this was inevitable. We were so much in the dark, we had so much to learn and to unlearn, and such floods of light came upon men in the discoveries of LAENNEC and BRIGHT that medicine has not yet quite recovered its serenity. Although Dr. PARKES may be right in saying that no such work has been done since as was done by BRIGHT and LAENNEC, he would be the first to admit that other men have brilliantly used and continued their discoveries, the exposition of whose labours would afford ample material for another address in medicine. Dr. PARKES's own address, indeed, indicates very clearly the high opinion in which he holds the medical work that has been done of late years, pathological largely no doubt in character, but having the most important bearings on the efficacy of medicine both in its curative and in its preventive departments.

Not the least gratifying feature of the Address in Medicine was the justice done in it to those pathologists who have also had to do hard work as physicians through a long lifetime, and who have had to see their views alternately received and rejected till the time of their final acceptance. In this connexion we mark with much gratification the mention of Dr. WILLIAM ADDISON's (of Brighton) description in 1839 of the emigration of the white blood-cells through the walls of capillaries in inflammation, and of Dr. C. J. B. WILLIAMS's appreciation of the fact. Neither was the part played by tissues outside vessels completely overlooked by observers before the proliferation of tissue-cells was fully understood. For there were men, like Dr. ALISON of Edinburgh, who regarded "inflammation as a condition of the living body, in which *an alteration of secretion and nutrition* as well as of the capillary circulation is essentially concerned." Dr. PARKES did not go into much detail in regard to the progress of medicine as a healing art; it was rather from the necessary limitation of his time than from any want of material inclination for such discourse on his part. We will take comfort from his modest though comprehensive

summing up: "On the whole, we diagnose, I conceive, fairly, and have a tolerable knowledge of how the state we discover can be best dealt with."

In illustration of the milk-theory of the origin of typhoid fever, Mr. ALFRED SMEE communicated to *The Times*, a few days ago, some observations which, though not entirely novel, are of very great importance. Mr. SMEE'S London house is, it appears, supplied with milk, cream, and butter from some cows of his own at Wallington. For a short time in the spring these cows were fed on sewage grass, when the butter became so offensively rancid that the family could not bear it on the table. When the sewage was discontinued, "the cream, milk, and butter resumed their former excellence." The experiment was repeated without notice to the family, with the same result as before; and Mr. SMEE declares that he has reason to suspect that the fact "is thoroughly well known to our dairy proprietors." Mr. SMEE introduces his remarks with the succinct statement that he is "in a position to explain the occurrence of typhoid fever from the use of milk."

It will be familiar to many of our readers that fears have frequently been expressed of the effect of sewage grass on the lower animals, and so, indirectly, on man. The point has been considered by almost every one of the commissions and committees which have investigated the sewage question; and we believe we are correct in stating that in every case the result has been a conviction in the minds of the reporters that these fears were illusory, and that, practically, there was no more danger in applying sewage to grass than in applying the liquid manure of a farm-yard to a growing crop. We are by no means anxious to overrate these conclusions. The observations upon which they rest are not sufficiently numerous or exact to justify anything like dogmatism in regard to them. It is proverbially difficult to prove a negative, and the question is one of such vast importance that any statements bearing upon it are entitled to the most respectful consideration. But, nevertheless, the fact remains that to the present time no distinct evidence has been brought forward of evil arising from sewage irrigation; and when we consider that irrigation is pretty generally allowed to be on the whole the most satisfactory method for the disposal of sewage, we find ourselves compelled to ask for very distinct evidence of its danger before we venture to discard it.

The oldest and in some respects the most remarkable example of British sewage irrigation is afforded by the well-known Craigentinny and other meadows near Edinburgh, where four or five good grass crops are yielded every year by land which was formerly barren sand, and where the system has been in partial use for about two hundred years. In these meadows the grass receives an enormous and excessive amount of sewage, complete purification being unnecessary, as the effluent water goes to the sea. The remark made in regard to them by the Rivers Pollution Commissioners has therefore considerable force, and may well be quoted here: "If sewage irrigation had really bred a special class of diseases, it would hardly have been tolerated for two centuries on so vast a scale near Edinburgh."

Even more satisfactory, because more systematically and scientifically observed, are the large experiments on irrigation which have for years been conducted at Rugby and Croydon, those at Rugby having been framed and carried out by the scientific members of a Royal Commission. No grave objection was urged against these experiments by anyone. At Rugby cattle were fed extensively and continuously with the sewage grass, and the milk was regularly analysed for two years. No important difference was observed between the milk from sewaged and unsewaged grass, and it is scarcely possible that any could have existed, as it could hardly have escaped the notice of such experienced and impartial observers as Professor WAY and Dr. GILBERT.

We will turn now to another point of evidence. Some time ago the Sewage Committee of the British Association commissioned Dr. SPENCER CORBOLD "to examine and report as to the presence of parasites in the flesh of a cow which was reared and fattened exclusively on the products of sewage irrigation by W. HOPE, Esq., V.C., of Breton's farm." * Dr. CORBOLD evidently held a strong feeling of the danger of sewage irrigation, but nevertheless he found "that the animal in question was entirely free from internal parasites of any kind." This observation, though on a different point to that now under discussion, has great value as showing that the cow, at any rate, is not injuriously affected by sewage grass.

Since the publication of Mr. SMEE'S letter, several letters from medical officers, managers of lunatic asylums, and others who have had experience in sewage irrigation, have appeared in *The Times*. They all agree that no harm is done to the milk by the use of sewage grass. The South Metropolitan School may be taken as an example. The population in these schools is sixteen hundred, and the daily consumption of water twenty thousand gallons, the whole of the sewage being applied to land. The cows eat the grass with relish; and Mr. HALES tells us that, after an experience of four years, he "can assert with much confidence that no evil has arisen from the use of this grass."

No doubt sewage irrigation requires great care and skill in its management; and it may be conceded that even in the most carefully regulated sewage farms noxious emanations cannot be entirely avoided.

Sewage irrigation is at the best an imperfect solution of the great problem, and the greatest praise that can be accorded to it is that it appears preferable to any of the schemes which have been proposed in its place. Perhaps the best statement of the objections to it is to be found in a recent report by Herr LEFELDT, a civil engineer who was appointed by the Prussian Minister of Agriculture to investigate the various English systems for the disposal of sewage. A remark which he makes with regard to the grass of the Edinburgh meadows may be quoted as lending some support to the theory adopted by Mr. SMEE. He says: "The capillary tubes for some inches above the roots are found to be filled with unassimilated fæcal matters"; and adds that, if the irrigation is continued till within two days of the mowing, the cattle will not eat the grass. Here clearly is a source of danger; but it must not be forgotten

* THE LANCET, Sept. 30th, 1871.

that in these meadows the sewage is not so much applied as misapplied to the grass.

In conclusion we must remark that, while the evidence of the sanitary safety of sewage irrigation is less perfect than it should be, we decline to throw it all on one side for the sake of the still more imperfect, and, as far as we know, isolated evidence adduced by Mr. SMEE.

LACK of space has hitherto prevented our noticing at length the Address in Surgery delivered before the British Medical Association by Professor JOHN WOOD, of King's College. The address was an able one, of which the personal experiences of the speaker formed the principal topics; and on two of the subjects touched upon—the radical cure of hernia, and the treatment of epispadias by operation—Mr. WOOD might have claimed probably a larger personal experience than any member of his audience. It is not, however, to these two subjects that we propose to refer, but rather to the very important statements put forward by Mr. Wood on the treatment of wounds.

Within the last ten years two or three attempts to revolutionise the surgery of wounds have been originated in this country with partial and temporary success. First came acupressure, the invention of SIMPSON, which was supposed to secure union by the first intention without any drawbacks, but which has failed to hold its own, save in Aberdeen under the auspices of Professor PIRRIE. Those members of the British Medical Association who attended the meeting in Dublin in 1867 will remember the enthusiasm of the Scotch Professor on the subject. Then came the revival of torsion of arteries, which has been followed to a limited extent, and especially at Guy's Hospital; but it cannot be said to be of universal applicability. Lastly, we have had Professor LISTER'S antiseptic system, which has been fully laid before the readers of THE LANCET, and which the author himself demonstrated to the British Medical Association at Plymouth in 1871. Now, but two short years after, we have Mr. WOOD gainsaying much of LISTER'S teaching, and supported by many speakers in the Surgical Section.

We are not going to enter upon a discussion of the "germ theory," nor the bearing upon the production of bacteria &c. which the recent discovery of living worms by thousands in human blood must necessarily have. We have to deal only with the facts brought before us by Mr. WOOD, and which are confirmed by the experience of many other surgeons, that wounds heal by first intention although exposed to healthy atmospheric influences, and that no amount of care will ensure this result when the condition of the patient is unhealthy. The disciples of Mr. LISTER are somewhat difficult to convince, because they have the convenient saving clause, that if the treatment fails some error must have been committed. The modern school cannot believe apparently in healthy suppuration, and speaks of "putridity" where the ancients would have seen nothing but "*pus laudabile*." Mr. WOOD, on the other hand, favours Mr. LUND'S motto, "Keep the wound clean"; and this is, we believe, the great secret of Mr. LISTER'S success. A clean-cut superficial wound will heal perfectly if its edges are kept in apposition throughout, and its surface is kept dry. A deeper wound must be efficiently drained, and a granulating wound must be kept clean.

That there are occult atmospheric influences tending to the production of erysipelas and pyæmia cannot, we think, be doubted by any surgeon of experience, who at one time finds all his cases doing well, and at another going wrong, though under apparently precisely similar circumstances. Most candid observers would probably agree with Mr. WOOD that "the agencies, whatever they are, in pyæmia operate in the general system, or, if through the atmosphere, in other channels besides the wounded part."

SOME time ago* we reviewed in terms of well-deserved praise a work by Dr. J. FAYRER, entitled "The Thanatophidia of India"; and drew particular attention to the fearful statistics of loss of life from snake-bite which Dr. FAYRER had collected. It is estimated that not less than 20,000 deaths from this cause take place every year in Hindostan, which amount to about 1 in 10,000 of the population; and if we add to this the almost equal mortality due to tigers and other beasts of prey, the power of the lower animals in our Eastern dominions is shown in startling colours.

Since his return to England Dr. FAYRER has associated himself with Dr. T. LAUDER BRUNTON in the prosecution of a very valuable series of researches on the nature and physiological action of the poison of the Naja tripudians (cobra) and other Indian venomous snakes. The first part of these researches has recently been presented to the Royal Society, and is highly interesting, although the results are somewhat incomplete.

The memoir begins with a recapitulation of the statistical and physiological results which Dr. FAYRER had already published, and which had paved the way for the present experiments. Dr. FAYRER reached the general conclusion that the action of the poison was on the nerve-centres, but failed to discover whether it was entirely localised in those centres or extended to the whole nerve-apparatus, or even beyond it. He had investigated all the methods of treatment which had been suggested, and was compelled to consider all alike as futile.

The starting-point in the present investigation may be given in the authors' own words, which convey a clear idea of the hypothesis which they have been testing.

"There is apparently some analogy between the nature of the action of the cobra virus and that of curara, death in both cases being brought about by arrest of respiration through paralysis of the respiratory apparatus. In the case of the curara it has been demonstrated by experiment that this is due to paralysis of the peripheral distribution of the motor nerves; and it has been further shown that, if respiration be continued artificially for a sufficient length of time, perfect recovery may take place, as we have ourselves observed, the poison being eliminated from the system, and not having, during its presence, so far compromised the integrity of the parts of the nervous system where it took effect as to interfere with a resumption of their functions after its removal. Now, it is evident that artificial respiration and the use of any remedies that may expedite elimination, with the application of artificial warmth to sustain temperature up to the normal standard, are the measures which may be regarded as antidotal in a rational sense to

* THE LANCET, Sept. 21st, 1872.

this form of poisoning; and such they have proved themselves to be, for if any animal apparently dead from curara poisoning be kept warm, and artificial respiration be kept up for some hours, it will perfectly recover. It is in the application of similar principles that we may look to realise a similar result in cases of snake-poisoning."

The experiments were made with cobra virus sent from Bengal. It is described as, when fresh, "a transparent, almost colourless fluid, of a somewhat syrupy consistence, and not unlike glycerine in its appearance." Dr. ARMSTRONG made a chemical examination of it, but was unable to separate any crystalline principle. The chief constituent is an albuminoid body, partially coagulable by heat, and thrown down by mineral acids and by absolute alcohol. Ultimate analysis showed little difference between the poison, the alcoholic precipitate, and the alcoholic extract. The extract contained nearly the whole of the active principle, the precipitate being almost inert. The cobra virus is in this respect opposite to that of the rattlesnake, of which the alcoholic precipitate is said to contain the whole of the virus. The poison examined by Dr. ARMSTRONG was, however, not fresh.

The first series of experiments was devoted to the study of the effects of the poison and its alcoholic extract and precipitate on dogs, rabbits, and guinea-pigs. The general symptoms are described as "depression, faintness, hurried respiration and exhaustion, lethargy, nausea, and vomiting." But the most remarkable observation made was the long continuance of the cardiac pulsations after apparent death, which, the authors remark, "excludes failure of the circulation as the usual cause of death," and points to asphyxia as the more probable cause.

In illustration of this theory, some experiments were then made in which the poison was injected after or just before the introduction of a canula into the trachea of the animal, by which artificial respiration could be maintained. The results obtained were interesting, and to a certain extent valuable, for although the experimenters did not succeed in saving the lives of the animals which had received the poison, they did succeed in delaying death, in one experiment, for several hours. Perhaps the most striking of these experiments is one which was made upon a fowl. It soon began to droop, and fell over on its side. "The comb and wattles lost their bright-red colour and became dusky. Almost simultaneously convulsions occurred"—due, according to the authors, to the venosity of the blood. "A canula was quickly inserted into the trachea and artificial respiration commenced. The comb rapidly regained its bright colour and the convulsions ceased. On the artificial respiration being discontinued, the lividity of the comb reappeared and convulsions again began. The experiment was repeated about ten times, and on each occasion the convulsions disappeared whenever the blood became arterial, as shown by the bright colour of the comb, and reappeared when the blood became venous. After discontinuing artificial respiration [why was it discontinued?] the convulsions returned and the fowl died."

These experiments are of course inconclusive, but they certainly tend to show that artificial respiration is one of the levers that must be worked in the treatment of the bite of the cobra. If the authors succeed in finding some agent which shall, while maintaining the vitality of the animal, promote the elimination of the poison, they may possibly, by employing it conjointly with artificial respiration, attain their noble object. We shall look with interest for their next series of experiments.

Medical Annotations.

"Ne quid nimis."

THE CHOLERA.

IT was announced on the 18th inst., that on Sunday last the Danish emigrants (who had been for the previous sixteen days under observation off Gravesend, as suspected of cholera), received a clean bill of health, and sailed for New Zealand *vid* Plymouth. We propose to pass in review briefly the details of this outbreak, so that the profession and the public may know the sum of the matter concerning it, and duly weigh its gravity and importance. In the early morning of Monday, the 28th of July, a party of emigrants, consisting of twenty Swedes and sixty-two Danes (the majority being children), was landed at Blackwall from the steamship *Iris*, which had received the emigrants at Hamburgh on the morning of the 26th ult. It is reported that all were well when the vessel passed Gravesend and when she reached Blackwall; but shortly after these persons were located in various lodgings in Whitechapel and Tower-hill, a man (a Dane) was attacked with symptoms of cholera, and at seven o'clock the same morning a little girl (a Swede) was also attacked, and died the same afternoon. These cases were seen by Mr. Holt, of the Minories, and afterwards by Dr. Buchanan and Dr. Gwynne Harries, who attended from the Local Government Board. That department considered it most desirable, under the circumstances, that these emigrants should be immediately collected, isolated from the metropolitan population, and placed under medical observation. A conference took place, and ultimately the Corporation of London, representing the Port Sanitary Authority, agreed to receive these emigrants on board their hospital-ship *Rhin*, at that time unoccupied. The entire party was collected by the exertions of Mr. Liddle (medical officer of health for the Whitechapel district), sent down to Gravesend, and isolated about sixty hours after arrival in London. They were placed under the medical charge of Dr. Whitcombe, surgeon to the *Rhin*, who, the day after their arrival, found a second man with severe choleraic diarrhœa, which in due course was followed by collapse. This man eventually recovered, but the Dane first attacked died. But diarrhœa, mostly of a choleraic character, commencing and continuing, it was absolutely necessary to separate the sick from the healthy, and after long and troublesome negotiations a vessel was chartered by the emigration agency, and sent down to Gravesend on the 9th inst. (nine days after the original isolation), on board which all the healthy emigrants were placed. These latter from this date did fairly well, though it was found necessary to take back one party to the *Rhin* on account of diarrhœa. But it was evident that the separation had effected what was necessary. A clean bill of health was given to seventy-two persons on the 14th, and to the rest on the 17th. During the period of isolation, 26 cases of sickness, and 7 deaths occurred (exclusive of the fatal case in the Whitechapel district). The fatal cases on board the *Rhin* comprised one man, one woman, and five young children, varying in age from twelve months to three years. Of the total number of fatal cases, five were Swedes and three

were Danes, three of the Swedes belonging to one, and two of the Danes to another family.

We give this summary of the facts of the case without comment because the practical bearings of the action have already been sufficiently indicated, and because, as we remarked last week, the Medical Department of the Local Government Board will shortly be furnished with full details.

DIVISION IN THE PROFESSION ON THE PROVIDENT SYSTEM.

IT requires a clear head to differentiate the various meetings which are held in Manchester on this subject, and the various conclusions arrived at. Our readers will remember that the profession lately met with closed doors, and passed resolutions condemnatory of the proposal to establish provident institutions. We remarked at the time on the impossibility of estimating the importance of the resolutions of a meeting the proceedings of which were not reported; and it now appears from various statements in the Manchester papers that the meeting was by no means so harmonious as the report, or rather non-report, of its proceedings seemed to imply. Some of those who voted for Dr. Royle's motions seem to have done so with very different views of the main question, many of them looking forward hopefully to the coming "scheme" in Manchester.

On the 21st of July, as already reported in our columns, there was a meeting of the Medico-Ethical Association, at which Dr. Royle quite failed to carry the resolutions against provident dispensaries which he had carried at the meeting of the profession. The motion proposed by him, and the amendment to it, which was carried by a large majority, will be found in THE LANCET of August 2nd.

On the 12th of August the Committee of the Medical Charities of Manchester and Salford met, and adopted resolutions in favour of provident associations, similar to those passed by the Committee and others interested in the question on the 10th of July.

The contrary results of meetings which ought equally to represent the profession serve to show an extremely divided opinion on this matter. Under these circumstances there is only one thing that will save the profession from unseemly discord, and appearing before the public to a disadvantage, and that is tolerance on both sides and a readiness to try reasonable experiments. It would be absurd to maintain that nothing more can be done to develop the providence of the working classes. On the other hand, the Medico-Ethical Association is not in a position to speak dogmatically on the effect of its three principles: (*a*) that the provident institutions to be established shall be entirely self-supporting; (*b*) that every qualified medical man shall have the option of attaching himself to one society; and (*c*) that no medical officer should delegate his duties to an unqualified assistant. If must be remembered that these principles have never yet been fully tested by experiment, and that the only provident institutions that have, as a matter of fact, succeeded, have been those which have not been entirely self-supporting, and in which the number of medical men attached is limited. It seems to us that in Manchester the time is come for proceeding to do something, and for the discontinuance of meetings. One thing has been much talked about, but never done thoroughly—namely, the investigation of the position and means of patients. Very partial and imperfect attempts at this investigation have been made, but no exhaustive inquiries on a large scale. The discovery of a thriving tradesman, or a comfortable working man, or perchance a lady in her servant's clothes, has disturbed the sober judgment of the investigator, and left him of opinion that "the poor in a loomp is bad." It cannot be too strongly urged that the first thing the medical charities of Manchester and of other places have to do is to investigate thoroughly the *need* of the patients whom they relieve. This cannot be decided by merely ascertaining their wages. It must be further ascertained what the wages have to do, and the element of sickness in any given family must be minutely inquired into as one of the most costly and embarrassing, both as involving bills for attendance, for funerals, &c., and as disabling in many cases the breadwinner himself, or his wife, who among the humbler classes is generally required to work.

HEALTH OF THE POLICE.

THE Annual Report of the Commissioner of Police of the Metropolis is so interesting a document, that, with the one just issued before us, we cannot but wonder that the doings of a force with whose efficiency the comfort and security of the vast metropolitan community are indissolubly associated, should have been, until within the recent period at which these reports were first introduced, allowed to lie wrapped in the obscurity of mere official cognisance. London within the police limits contains, in round numbers, 4,000,000 of people, and at the end of 1872 the total strength of the force was 9761, so that after making allowance for the City Police, which are under a separate jurisdiction, we have a proportion of 1 policeman to every 400 inhabitants. It is not our province to deal with the many features of general interest contained in this report, but we may observe in passing that, whereas the force was augmented in 1872 to the extent of 106 men, the increase of population under supervision amounted to not less than 75,000. We note also that the number of persons arrested by the police in 1872 was 78,203, in excess by 6242 over the arrests of 1871; nearly the whole of this large increase is accounted for under the head of drunkenness, which, the Commissioner says, "seems to be a sort of epidemic," of which apparently we are passing through an outbreak that demands correspondingly active measures of suppression. And further, as we have occasionally to call in question the proceedings of the police in reference to persons found insensible in the streets, it is only fair that we should quote the following paragraph from the report:—

"Out of 1658 cases of insensibility, intoxication was in 1044 cases the cause, but, as a matter of humanity and precaution, medical aid is called in in every case in which there is the slightest doubt. Medical aid was afforded in all these cases at a cost to police funds of £2021 16s. 6d., of which only £100 15s. 9d. was repaid by the persons so attended, leaving a charge on police funds of £1921 0s. 9d. In the large majority of cases the insensible persons are not of a class from whom the medical fee can be recovered."

Turning now to the chief surgeon's report on the health of the force, we come at once upon the satisfactory announcement that the daily loss from sickness is now considerably less than half of that which prevailed in 1866, when Mr. Holmes issued his first report. And this diminution having been continuous during the whole six years, from 5·5 per cent. in 1866 to 2·5 in 1872, it is clear that such a result is not a mere matter of accident or chance, but may be accounted for by the increased care which is taken for the men in all that concerns their health. An efficient policeman is a valuable article, and we suspect that the satisfactory account above given is just the expression of the clearer recognition of that fact by the police authorities. With a body of men exposed as the police are to all kinds of weather, it is not surprising that a large proportion of the sickness occurring among them is due to such diseases as common cold, sore-throat, bronchitis, and rheumatism. Thus, out of a total of 5609 cases of sickness of all kinds oc-

curring last year, 2298 were returned under the head of rheumatism, coryza, bronchitis, and tonsillitis; and the ratio of such cases would no doubt have been still higher had the weather at the beginning and at the end of 1872 not been warmer than usual. More than half the cases of sickness in the force were of a light and trivial character, terminating within a week of their commencement. Mr. Holmes's statistics show that hardly 2 per cent. of the sickness in the force is of such a character as to require hospital treatment, and hence he concludes that there can be no need for incurring the expense of a special police hospital. The death-rate was 4·2 per 1000, as compared with 5·2 in 1871.

When the multifarious duties which the police have to perform, the temptations to which they are exposed, and all other circumstances are taken into consideration, the Report before us must be taken as most satisfactory evidence of excellent organisation, upon which the Commissioner and the chief surgeon may both be congratulated.

THE PHYSIOLOGICAL ACTION OF LIGHT.

SINCE their first paper on this subject, Drs. Dewar and M'Kendrick have been conducting experiments involving time as the variable element in the case of the action of light upon the retina or optic nerve, and have progressed satisfactorily towards quantitative results in estimating the variation of the electro-motive power during the impact of light.

These experiments show that on the impact of light there is a sudden increase of the electro-motive force, which falls to a minimum during the continuance of light; but that, on the withdrawal of light, there is an *inductive effect*—that is, a sudden increase of electro-motive force. They consider the ebb of electro-motive force during the continuance of light to be the physical representation of fatigue; the *inductive effect* to exhibit the return of the structure to its normal state. These phenomena are found to be frequently interfered with by the dying of the structures. The impact of light has no effect upon the electro-motive current which may be obtained from a mass of choroidal pigment cells, by using the cornea and the posterior surface of the lens as the poles, or from the sclerotic and nerve without the retina. Whereas, when the entire front of the eye has been removed at a level behind the lens, and the clay pads have been applied directly to the retina and section of the nerve, the deflection has been as sensitive to the action of light as when the whole eye was employed, thus eliminating the possibility of the contraction of the iris under the stimulus of light having to do with the results previously obtained. With regard to the effect produced by lights of different intensities, it has been found that with a light one hundred times in excess of another the electro-motive force only becomes three times greater. The query then suggests itself, Are these changes the representatives of what is conveyed to our sensorium? If the observed differences in electro-motive power under conditions of varying luminous intensity accord with the law of Fechner (confirmed by Dalbeauf's experiments) regulating our sensational impressions, then it will be pretty clear that these variations are the cause of, and proportionate to, our sensational differences. The effects which occur on, during, and after the action of light on the retina, are present after the eye has been severed from the brain. Thus, contrary to general opinion, Fechner's law appears to be a function of the terminal organ, the retina, rather than of the brain. The influence of light on the electro-motive force of the retina has now been traced to the brain, and in a chloroformed pigeon the following results were obtained:—When one pole was applied to the left optic lobe, and the other to the cornea of the right eye, a deflection was noticed which was sensitive to light. When the pole was removed from the right eye, and applied to the cornea of the left, a smaller deflection was obtained, also sensitive to light. When, with one pole in contact with the left optic lobe and the other with either cornea, light was allowed to impinge upon both eyes, the deflection indicated almost double the action that resulted from the impact of light upon either eye singly. Experiments have been made on the eyes of crustacea; these are important, as showing that the action of light on the compound eye is the same as on the simple—namely, to alter the amount of the electro-motive force of the sensitive surface. This has been demonstrated in the following groups:—Mammalia, aves, reptilia, amphibia, pisces, and crustacea. This method of research is as important as it is interesting and novel, and we look forward to seeing it greatly extended to the senses other than that of vision. We may add, that any theory which suggests heat as influencing the appreciation of light appears doubtful, inasmuch as a beam of uncondensed moonlight, almost devoid of heat rays, is sufficient to alter the electro-motive power of the nerve and retina.

THE PUBLIC HEALTH ACT IN KENT.

THE extreme confusion of ideas existing amongst sanitary authorities on the subject of the Public Health Act, and the best means of carrying it into operation, receive further illustration in the proceedings at a conference of Poor-law guardians held at Maidstone on Wednesday, the 13th inst. The meeting was numerous and influential, consisting of representatives from various unions in the counties of Surrey, Hants, Sussex, and Kent. The advisability of appointing medical officers of health for large districts in preference to single unions was discussed at considerable length, eliciting various and contradictory opinions, but ending without practical result. The most noteworthy incident in this discussion was a speech made by one of the lay assistant-inspectors of the Local Government Board, who supported the policy of appointing an officer over a large district for a reason as peculiar as it is characteristic—namely, that if the medical officer's districts were small he would be "running over the heels of the inspector of nuisances." This shows plainly what his idea of the relative position of the two officers is, for to "run over the heels" of anyone it is necessary to follow him. Amidst this sanitary muddle, it is pleasant to find a board of guardians taking any step that may be considered judicious, even although it be the effect of chance. An instance of the kind came to light at this meeting, when the chairman of the Tunbridge union stated that his board had written to all the medical officers in the union and district asking them to communicate to the medical officer of health information of all cases of infectious diseases which come under their notice, and—this is the praiseworthy point—promising to pay them a fee for so doing. It is absolutely necessary for the due performance of the duties of medical officer of health that he should obtain the earliest information of the outbreak of zymotic disease in his district, and, in the absence of a systematic registration of disease, it is difficult to see what better plan could be followed to effect this object than that adopted by the Tunbridge guardians. We, therefore, commend their example as one to be followed by all unions in combined districts; and we trust that in this case the Local Government Board will not refuse to sanction the necessary payments, as it has done with reference to those made to registrars of deaths for supplying analogous information.

Another subject considered at the meeting was the special precautions necessary to be taken in order to prevent disease where it is very likely to occur—namely, amongst the hop-pickers; and a resolution was passed recommending

that powers should be given to the different local authorities to make bye-laws on the subject.

On the whole, a commendable anxiety was shown by the different speakers to find and adopt means to improve the sanitary condition of their several districts; but, in the absence of anyone qualified by technical knowledge, experience, and training, to advise with authority on the subjects under discussion, the meeting was comparatively barren of results.

FRENCH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

TO-DAY (Friday) the French Association for the Advancement of Science opens at Lyons. Lille and Havre were also candidates for the honour of harbouring the Association, but Lyons had, justly, the prior claim. She already numbers thirty foundation-members of the Association, and her subscribers are annually on the increase. The municipality has voted 20,000 francs for the meeting, and has placed at the disposal of the members the Palais Saint Pierre and the salons of the Hôtel de Ville. The bureau of the Association consists of M. Quatrefages, of the Institute, president; M. Adolf Wurtz, of the Institute, vice-president; M. Levasseur, also of the Institute, general secretary; M. Laussédah, general vice-secretary; M. Friedel, of the School of Mines, *archiviste*; M. G. Masson, treasurer; and M. C. M. Gariel, Professor Agrégé of the Faculty of Medicine, secretary to the Council. The local committee has completed all its arrangements for the worthy reception of visitors, foreign as well as French, and the railway companies will grant tickets at reduced fares. In addition to the programme of the general sittings and of the sections, that of the scientific excursions is most attractive. The first of these will include the iron mines and forges of the Voûlte and Pouzère; the second, the exploration of the celebrated station of Solutré, probably synchronous with that of Langerie Haute in Perigord; the third, the industrial basin of the Loire, with a visit to the establishments of Rive-de-Gier, of Saint Chamont, of Saint Etienne and Firminy. The meeting promises to be more brilliant than its predecessor at Bordeaux last year, rich as that was in papers and discussions of scientific interest. The first volume of the report of the Bordeaux Congress, by the way, has just appeared—a tome numbering more than 1350 pages, and containing such valuable papers as those of Dr. Alphonse Guérin on "Community of Blood"; M. Paul Broca's on "Pre-historic Man"; M. Cornu's on the "Sun"; and M. Levasseur's on "Commercial Geography" (a truly admirable dissertation). The English *savant* will find much in the Lyons meeting of the French Association to reward a visit.

THE INVENTOR OF ANÆSTHESIA.

THE question as to whom belongs the honour of having invented anæsthesia seems destined never to be settled, and the *New York Evening Post* of June 30th devotes no inconsiderable part of its space to the re-ventilation of this vexed question. There appear to be two contending parties, Mortonites and Wellsites, neither of whom seem capable of taking a perfectly just view of the matter. In 1844, Dr. Horace Wells, of Hartford, had one of his own teeth extracted during anæsthetisation produced by nitrous oxide, and, subsequently, he repeated the experiment on some of his patients, but he did not succeed in establishing the use of nitrous oxide, an honour which belongs mainly to Dr. Evans, of Paris. Wells was not the discoverer of the anæsthetic properties of nitrous oxide, for it is well known that our illustrious countryman, Sir Humphry Davy, had made known that fact nearly half a century previously. Morton, of Boston, succeeded in establishing the use of ether as an anæsthetic, his first operation during its employment having been performed in September, 1846; but Morton was not the first discoverer of the anæsthetic properties of ether vapour, an honour which belongs to the writer—possibly Faraday—of an anonymous article in the *Quarterly Journal of Science and Arts* for 1818. None of these persons can possibly lay claim to be the inventors of anæsthesia, for anæsthesia (in a very rude form, certainly) appears to be of a much older date. Dioscorides (A.D. 50) recommends that decoction of mandragora should be given to those who are to be cut or cauterised, "when, being thrown into a deep sleep, they do not feel any pain." Then again, Theodoric, a writer of the 13th century, recommends that a "spongia somnifera" impregnated with spirituous extracts of various narcotic substances, should be held to the nostrils till sleep was induced. Coming to later years, it is said that Dr. Collyer, of Louisiana, five years before Wells's experiment, performed successfully some operations with patients under the influence of alcohol in which poppy-seed and coriander had been steeped. The real facts of the case seem to us to stand thus:—Discoverer of anæsthetic properties of nitrous oxide, Sir Humphry Davy, 1798; discoverer of anæsthetic properties of ether vapour, Faraday (?), 1818; discoverer of anæsthetic properties of chloroform, Waldie, of Liverpool, 1847; first employer of nitrous oxide, Dr. Horace Wells, 1844; establisher of nitrous oxide, Dr. Evans; first employer and establisher of ether vapour, Dr. Morton, 1846; first employer and establisher of chloroform, Sir J. Y. Simpson, 1847.

These matters are not to be looked at in any narrow spirit, and, to our minds, the man whose energy and determination succeed in popularising any new discovery is deserving of almost equal credit with the inventor. For example, Mr. Cyrus Field is not the inventor of telegraphs, but it is mainly to his dogged determination that we owe the fact that distant quarters of the globe are at this day united by electric wires. He succeeded in convincing the world that the thing was practicable, and he is therefore entitled to share the honours with Wheatstone, Morse, and Canning.

DR. DICKSON, R.N., ON PORT SANITARY WORK.

THE Seventeenth Report of the Commissioners of Her Majesty's Customs has just appeared, which includes as usual the very able and instructive summary of the health of officers of Customs, by Dr. Walter Dickson, R.N., their medical inspector. It appears that the staff of out-door officers (who form this year, as always, the chief subject of comment) has lately undergone a considerable reduction, to the extent, indeed, as it appears, of no less than 120 men, and that the individual changes in its composition have been unusually numerous. The quarterly returns, with remarks on the meteorology of the several periods into which Dr. Dickson divides the main body of his Report, do not appear to call for any special comment, except that they intensify an opinion expressed by the author (we think) some two years ago, as to the importance of instituting and maintaining statistics of sickness as well as of mortality. Such statistics, as applied specially to such classes of men as Customs officers, to seamen, and to the army and navy, are invaluable in assisting the advance of preventive medicine and public hygiene. But, having regard to the fact that port sanitary work is now receiving special attention, and that the sanitary authority of the Port of London is about, as we hope, to organise a systematic sanitary supervision over the mercantile marine community on the Thames and in the docks, the concluding

remarks in the Report of the Medical Inspector of Customs are specially worthy of attention. In remarking upon the good health of the Gravesend division of the force during the past year, he says:—

"As these officers spend their lives on board vessels from abroad, all of which are for a longer or shorter time under their surveillance, their sanitary condition may be considered to be a fair criterion of that in the port in connexion with its foreign trade. Their almost entire exemption from zymotic disease, not only in this, but in preceding years, is very remarkable. Even in the great cholera visitation of 1866, when they were of necessity often living on board ships from infected countries, no instance of the malady appeared among them. Dr. Russell, of Gravesend, who has been in immediate charge of this section for nearly half a century, informs me that in his recollection he has hardly ever known an instance of officers of the Customs having been infected from contagion existing in vessels where they have been boarded. And from my own knowledge, extending over eleven years, of the more numerous London division, whose daily business is in ships in dock while discharging cargo, but who do not, like the Gravesend officers, eat and sleep on board, I can fully corroborate his testimony as to the extreme rarity of disease traceable to infection on board ship in a class of men who, more than any other, are exposed to such risk. So far, at least, as vessels 'from foreign' are concerned, the Port of London appears for many years to have been as healthy as the healthiest parts of the metropolis. With regard to the coasting trade, however, there is probably more necessity for supervision. No statistical data exist on this subject, and it is surmised that these small vessels are sometimes foci of zymotic disease. The systematic sanitary inspection of the port directed by the Local Government Act of 1872, and undertaken by the Corporation of the City of London, can hardly fail to benefit that important class of the seafaring community who navigate on our coasts and rivers, and who, by reason of their frequent changes of position and the number and conflicting jurisdiction of riparian local authorities, have hitherto escaped surveillance."

The experiences of Dr. Dickson and Dr. Russell are very valuable, as indicating the course of action that in the opinion of the former had best be taken by the Thames sanitary authority. We shall recur to the subject when the Corporation authorities have organised their sanitary arrangements.

DRUGGISTS AND THE PRESCRIPTIONS OF MEDICAL MEN.

THE death of a tradesman from delirium tremens at Ramsgate under the following circumstances has excited much discussion. The facts were brought to light by a coroner's jury. The tradesman was attended by Mr. James Richard Leake, a retired army surgeon, L.R.C.P. Edin., M.R.C.S. Eng., and L.S.A. Mr. Leake, finding his patient very excited, and not benefited by a dose of opium, prescribed half an ounce of tincture of digitalis, which the druggist refused to dispense, on the ground that digitalis was an uncertain medicine and the dose prescribed an excessive dose, being eight times that recognised by Squire's Pharmacopœia. Mr. Leake before the coroner justified his prescription, and was ably supported in doing so by Mr. J. Pearson Cresswell, the ordinary attendant of the patient, who had been from home at the time of his death. He naturally threw the onus of the man's death on the druggist, of whose conduct the jury expressed their disapproval. There can be no doubt that the druggist in this case acted very wrongly. And the sooner it is understood that medical practice is not to be limited by a druggist's opinion of a prescription, even if it be backed by Squire, the better. If a druggist is in doubt about the accuracy of a prescription or the intention of a practitioner in regard to any given dose, it is his duty to take steps to ascertain whether the prescription is according to the wish and purpose of the writer. There, unless the dose is obviously poisonous, his responsibility ends. Here the druggist's refusal to dispense arose from his ignorance of medical science. He knew Squire very well; but he was ignorant of the fact that for years past it has been well known that large doses of digitalis, larger than Squire ever dreamt of, cured some bad cases of delirium tremens. Mr. Leake's prescription was quite in accordance with the practice of Mr. Jones of Jersey, and of others. For example, Dr. Garrod, whose authority will not be disputed, says he has "seen many cases of delirium tremens rapidly recover under its influence, sleep being speedily produced; but the doses have been very large, from two to four fluid drachms, repeated every four hours for two or three times only." Of course such a prescription is a responsible one; but the case was a very responsible one—*extremi morbi extrema remedia*; and in the absence of the medicine the patient speedily died. A druggist who refuses to dispense a recognised prescription even in gentle terms does a great injury to a medical man; and the druggist's mode of refusal in this case was not gentle. We regret to see the names of some medical men attached to a "round robin" exonerating the druggist for not making up the medicine without further communication with the medical man prescribing. It was the druggist's business to have sought such communication. Mr. Leake may, however, be well satisfied with the expression of opinion on the part of the jury, and with—what he will certainly have—the sympathy of the profession.

PRELIMINARY EXAMINATIONS.

THE public and the profession will feel obliged to Mr. Gay for bringing forward his motion in the Council of the College of Surgeons for procuring attention to the large number of candidates rejected in the preliminary examinations. The motion has been carried, and we may expect that at the next meeting of the Council, which will not be till October, a committee will be nominated to inquire and make a report on this subject. The rejections, we believe, are principally in Latin, Euclid, Algebra, and Greek. The proportion of rejections has varied from 20 to 50 per cent. Candidates are rarely rejected in one subject only. The interest of this question cannot be overstated. The fault may be either in the examinations being pitched too high or in the candidates being imperfectly educated. In the latter case the fault may be either in the candidate or in his teachers. And, to our mind, Mr. Gay's motion will be successful in proportion as it shall enable us to rightly apportion the blame between pupils and teachers, or rather modes of teaching. We have already said that, in one recent examination, 20 out of 22 candidates were rejected in Latin. We cannot believe that this can be explained without supposing thoroughly bad modes of teaching. However, we shall not anticipate the inquiry to be made by Mr. Gay's committee. We can only again express our great gratification at the commencement of what is practically an inquiry into the efficiency of the higher general education of the country. If something is not done to improve this, the children of board schools will outstrip the children of the well-to-do classes in the race of life.

RESEARCHES UPON INFLAMMATION OF THE CORNEA.

M. R. v. PFUNGEN (Stricker's *Med. Jahrb.*, 1873, Heft 1) states that he undertook the investigation of inflamed cornea with a view of settling the contested question respecting the origin of the corneal cells. It must not be supposed, he says, that when a tissue like the cornea is inflamed, especially after a wound, the changes which take place in it are identical at all depths; and therefore,

after establishing inflammation in the cornea of strong and healthy frogs by passing a thread through the centre and bringing it out by the sclerotic, he made such extremely thin sections that with a Hartnack's immersion system, No. 10, he could follow the changes that each cell had undergone. The gold, or silver and gold, tinting method was adopted. Before proceeding to describe what he maintains occurs—the passage of the fixed corneal corpuscles into pus-cells—he alludes to a peculiar kind of cell he has seen in cornea a few hours after the application of a stimulus. It consists of a cell-mass which appears partially divided by a split, or button-hole, leaving two small bridges on either side. Each part contains a nucleus, and sends off many radiating prolongations. He gives a drawing of a second kind of cell removed, after the lapse of six hours, from an inflamed cornea. It is flattened and coarsely granular, with a flat angular nucleus, and is connected with neighbouring cells by means of extraordinary broad processes. A few club-shaped processes are given off from the sides. This form of cell is doubtless a slightly modified fixed corneal cell. He pictures a third form, in which the cell is nearly divided into two—one half containing a single large, smooth, flat nucleus; the other, two groups of small nuclei, closely resembling pus-corpuscles. Other cells show still more distinctly the breaking up of the nuclei into bodies resembling pus-cells.

THE EPIDEMIC OF TYPHOID.

AT the moment of going to press we hear that in the parishes of St. George's, Hanover-square, St. Marylebone, and Paddington, there are no less than 104 families which have been attacked with typhoid. How many cases may be included in these families it is not possible to say at present, but we know of several instances where as many as five cases have occurred in one family, so that the estimate of 500 cases given in *The Times* on Thursday is probably not over the mark. Of these 104 families, 96 are known to have used to a greater or less extent the milk of the suspected dairy. The remaining 8 cases have not yet been investigated, but they are all, with one exception, open to the fallacy (which has been shown to have existed in some of the previous exceptional cases) that they may have imbibed the poisonous milk in the houses of friends or employers, if not in their own. In one case only there appear to be circumstances which preclude the possibility that the patient has ever had any of the suspected milk.

Sixteen cases have occurred in the Cripples' Home, and a seventeenth outside the Home, in a person who on one occasion unfortunately drank the milk of the establishment.

Of these 104 families, 18 are the families of doctors—a large proportion certainly, but not large enough to lend any colour to the assertion of the Milk Company, that the infection was due, not to the milk, but to the doctors themselves. It must be remembered that in these parishes a considerable proportion of the permanent residents are medical men. The Cavendish-square district is, in fact, to doctors what Lincoln's-inn is to lawyers.

THE ARMY MEDICAL SERVICES.

AT the late competitive examination 15 candidates presented themselves for the medical service of the British army, and 14 for that of the Indian army. Very few recruits were required for the former service, and it is understood that a superior class of men from the English and Scotch schools presented themselves for examination. The first man, who obtained 2318 marks, was from St. Bartholomew's, and he had for his competitors men educated at London, Edinburgh, and Aberdeen medical schools; the number from the Irish Colleges, as compared with former examinations, having been relatively small. We are informed that on the present occasion the British medical service obtained the best men, the successful candidates for the British service having gained a larger number of marks than those occupying a corresponding position in the pass-list for the Indian medical service. The first man on the list for the last-named service was educated at Guy's Hospital, and subsequently at Aberdeen University. There were eleven vacancies for the Indian medical service, and of the 14 candidates 13 were qualified for appointments, but 11 only could, of course, obtain them.

CAPILLARY LYMPHATICS OF THE SKIN.

DR. J. NEUMANN communicated to a recent meeting of the Royal Medical Society of Vienna the result of his researches on the capillary lymphatics of the skin, and a report of them appears in *Stricker's Jahrbücher*, 1873. Dr. Neumann finds that the lymphatics of the skin form an uninterrupted closed tubular system, the tubes having distinct walls, the internal surface of which is lined by flat epithelium. The walls are never perforated by stomata. There are never, consequently, any communications with the so-called juice canals or other interstices of the cuticular tissue. Moreover, no interstices can be discovered between the epithelial cells, even in diseased processes, which lead to dilatations of the vessels. 2. The capillary bloodvessels and capillary lymphatics are so disposed that the former always lie much nearer to the surface than the latter. At a deeper level the plexuses derived from each system cross each other in all imaginable directions. 3. The lymphatics form two distinct plexuses in the cutis, of which one is more superficial than the other, and is closer in its meshes. Their walls are capable of undergoing much dilatation. The superficial vessels are in general thinner, the deeper thicker, and both appear to be destitute of valves. Valves first make their appearance in the subcutaneous lymphatics. The larger lymphatics possess many cœcally-ending processes of various sizes. The lymphatics penetrate into the papillæ of the skin partly as simple tubes, and partly in the form of loops. 4. The adnexa of the skin, as the hairs and sebaceous follicles and sweat-glands, possess their own lymphatic capillaries at their periphery, but none appear to enter into the substance of the follicles themselves. The fat lobules are surrounded by loops of lymphatics. The lymphatics are largely developed in the subcutaneous connective tissue. 5. The richness of the lymphatic vessels varies in different parts of the skin; they are most abundant in the scrotum and the labia majora, and upon the palm of the hand and sole of the foot. 6. In pathological conditions of the skin dilatation of the lymphatics may sometimes be observed.

MEDICAL CERTIFICATES.

IT is to us a matter of profound regret that we so often have brought under our notice cases of medical certification which, to say the least, indicate an amount of laxity altogether incompatible with a proper sense of the responsibilities involved. No doubt many, perhaps a majority, of these cases simply show that after all there is "a deal of human nature" in medical as in other men, and that many of our brethren in the profession have so large a share of the "milk of human kindness" in their composition that they reverse the wise maxim which inculcates justice before generosity. This laxity, of course, is most commonly found to prevail under conditions in which no serious interests are concerned, but it should not on that account be overlooked. Those who chiefly profit by it are the malingerers in the various walks of life; and it may be said of these, as a class,

that they are for the most part unprofitable servants under any circumstances. Nevertheless it behoves every practitioner to remember that by playing into the hands of malingerers he may, however unintentionally, become a party to a fraud; and it is just because this aspect of the case is so often lost sight of that avoidance of duty on insufficient grounds is procured through the doctor's agency. We noticed lately, in the report of a County Quarter Sessions, that three persons who had been summoned on the jury sent medical certificates instead of putting in an appearance themselves. The certificates, it is said, simply stated that the jurors were "not fit to attend that day," the cause of their unfitness not being assigned. All three certificates were given by the same hand, which was that of a highly respected local medical man. The recusant jurors were fined £2 each for non-attendance, the court very properly regarding the evidence of the medical certificates as insufficient to warrant the jurors being excused from their legal obligations. It appears to have been forgotten in this case, which is a typical one for our present purpose, that a medical certificate ought always to have a scientific value, and should consequently be couched in scientifically precise terms. When it conveys nothing beyond a mere general statement, such as that above referred to, its scientific value is lost, and it becomes little more than an informal expression of opinion entitled to as much weight as if it were given by a layman, and no more.

A HUMAN TABLE.

IN the Italian section of the Vienna Exhibition Dr. Marini exhibits, among an assortment of human feet, hands, legs, arms, and busts of shrivelled proportions and deep-brown colour, a large, round plateau, evidently of hard and polished material, which has been likened to stale gelatine or potted boar's head. It is a conglomerate of specimens, illustrative of an art invented by him—the petrifaction and mummification of human corpses. It was this very Dr. Marini who petrified Mazzini, and executed his work so well that the admirers of the arch-conspirator proposed to set up the corpse on the capitol and save economical Italy the expense of a statue. The doctor's preparations are weather-proof, and will not only stand wear, but take on a high degree of polish. His mummified specimens, by a process known to him alone, can be restored to their original size and elasticity; while the petrified ones are as hard, and possibly as durable, as granite. The top slab of the table is composed of muscles, fat, sinews, and glandular substance—all petrified together in a block, the surface of which has been planed and polished till its face resembles marble. Certificates from Nélaton and other distinguished surgeons are attached to the specimen limbs, setting forth that the limbs in question had, for the satisfaction of the certifiers, been restored to their pristine softness and pliancy by Dr. Marini.

THE HOSPITAL SUNDAY MOVEMENT.

IN evidence of the gradual diffusion of this movement throughout the country comes the intelligence that it has just reached the steady-going old city of Winchester. On the last Sunday of July collections were made in all the places of worship in the city on behalf of the Royal Hants County Hospital, which has benefited thereby to the extent of £275. The hospital authorities will no doubt feel grateful to the Mayor for the timely and substantial aid afforded by this first Hospital Sunday in Winchester, which he has been mainly instrumental in promoting.

At Southampton the apportioners of this year's Hospital Sunday Fund have made their report to the general committee, from which it appears that the sum of £547 has been thus distributed:—South Hants Infirmary, £430; Southampton Dispensary, £67; Homœopathic Dispensary, £13; Nurses' Institute, £22; Lying-in Institution, £15. The apportioners decline to exercise any right to recommend patients to the infirmary or to the dispensary in respect of the sums handed over by them to those institutions.

At Warrington a public meeting has recently been held, at which it was decided to make simultaneous collections on the second Sunday in January next in aid of the medical charities; and on the preceding Saturday collection boxes are to be sent round to all the manufacturing establishments in the town so as to give the working classes an opportunity of contributing to the fund.

NEW REGULATIONS FOR MILITARY MEDICAL MEN IN FRANCE.

THE object is principally to educate young aspirants in military hospitals, whilst at the same time attending lectures and passing examinations for the degree of M.D. at any of the schools recognised by the Government, both in Paris and the provinces. After three years' successful probation the candidates must repair to Paris, where they continue their studies both at the large military hospital of Val de Grâce and at the Faculty.

The same regulations, somewhat modified, apply also to the military pharmaciens—a class of officers not known in this country, but who in France are highly educated, and must start with the diploma of Bachelor of Science.

To become a military medical pupil a trial by competition must be undergone, and the candidate must prove, as to medicine, that he has passed examinations for Bachelor of Arts and Bachelor of Science, or that he has successfully studied medicine for one, two, or three years, the age of admission varying accordingly. Up to their concentration at Paris the pupils receive nothing from the Government, and wear no uniform. Once incorporated at the Val de Grâce at Paris the pupils receive pay, and must appear in uniform. As soon, however, as the candidate has, after competition, been admitted a military medical pupil, the Government pays all the fees of the school. It remains to be seen how far young educated men will be tempted by these terms, and the ultimate prospects of the military career, to present themselves for competition.

SOCIAL SCIENCE CONGRESS.

THE Seventeenth Annual Congress of the Social Science Association will be opened at Norwich on the 1st of October, under the presidency of Lord Houghton. In the Health Section, Captain Douglas Galton will take the chair, and the following three subjects have been specially selected for discussion by the executive—of course, in addition to those voluntarily introduced by members:—1. What are the most convenient administrative areas for sanitary purposes, and what are the best means of administering the sanitary laws? 2. Should there be a special diploma for medical officers of health, and if so, how should it be granted? 3. What provisions are required in a General Building Act so as to secure necessary sanitary arrangements?

TYPHOID FROM INFECTED MILK.

CONCURRENT with the outbreak of enteric fever in the parish of Marylebone, the existence of typhoid in Brighouse, Yorkshire, was demonstrated, the propagation of which was undoubtedly due to the agency of infected milk. Dr. Britton, medical officer of health for the parish, in his report to the authorities, states that on making a house-to-house visitation in the district, he ascertained that the total

number of fever cases amounted to thirty. Of these twenty-nine had obtained their supply of milk from the same farm-house. The local board showed a laudable alacrity in stopping the sale of milk from the contaminated farm, and sent its inspector of nuisances round the locality to caution the inhabitants against its use. Since the publication of Dr. Britton's report we learn that several fresh cases of enteric fever have been recognised, in all of which the milk had come from the same source.

THE SANITARY AUTHORITY OF THE PORT OF LONDON.

IT is not every sanitary body that has the chance of giving so signal an illustration of its usefulness as that which has just been given by the Port Sanitary Committee of the City Corporation in the matter of the Danish emigrants, amongst whom cholera broke out after their arrival in London. *The Times* assumes that in the first weeks of its existence the Committee has saved the metropolis from an epidemic of cholera. There can be little doubt that, apart from the prompt action of the newly appointed medical officer of the Port, Mr. Harry Leach, in concert with the inspectors of the Medical Department of the Privy Council, we should have had an outbreak of cholera in London. Happily, this calamity has been so far averted, and we cannot be too grateful to the authorities who have acted so efficiently. No doubt a little bill will have to be paid by them. But this is nothing in comparison with the cost and the distress of even a limited outbreak of cholera.

ITALIAN PRISONS.

A MAMMOTH Blue-book has been issued by the Italian Government on the prisons and prison discipline of the peninsula. Out of the twenty-eight "bagni" or galleys, twelve belong to the late kingdom of Naples, which now, as heretofore, is the head-quarters of brigandage, and contributes 10,469 prisoners out of a total of 15,815. Strange to say, the health of these buildings, which retain the name of galleys from the original form of punishment, is on the whole good. Some of these are ancient castles; others stand on islands; and the majority are on salubrious sites. The three "bagni" in the ex-Papal States are, in two cases, very unhealthy. Those in Sardinia (mainland and island) present on the whole a good sanitary report. Compared with the French galleys, they are much more lax in discipline—the inmates frequently escaping. The French, on the contrary, are described as a hell upon earth; but they keep the convicts securely caged. The Blue-book is full of facts interesting to the sanitarian, the medico-psychologist, and the prison disciplinarian; and affords another proof of the social *renaissance* that is everywhere awakening in the kingdom of Victor Emmanuel.

MEDICAL OFFICER OF HEALTH FOR PEMBROKE.

THE Town Council of Pembroke have been constituted a port sanitary authority, and are consequently compelled to appoint a medical officer of health. Apparently they are at a loss to form any estimate of the duties to be performed by that officer, or of their probable value, for they advertise the salary to be "such a sum as may be fixed by the said Council, with the sanction of the Local Government Board, at the expiration of the term of office." By this it would seem that the holder of the office will have to be contented with whatever is given to him. The Local Government Board has not lately shown such an appreciation of medical services as to justify them in asking so great a mark of confidence at the hands of any member of the profession. The whole thing has the appearance of being an experiment, and it behoves intending candidates to take care that the experiment is not made at the cost of the successful one.

PYÆMIC WOUNDS.

WE are authorised to state that there is no truth in the statement which has lately been going the round of the daily papers that Dr. Braxton Hicks and two surgeons of Guy's Hospital were recently poisoned at a surgical operation, and that one of the surgeons subsequently died. Dr. Braxton Hicks, it is true, received a poisoned wound at a uterine operation some time ago, but we are pleased to state that he is now well advanced in convalescence, and will soon be able to resume his duties. At the same operation an assistant was wounded in the finger, but no serious constitutional symptoms followed. We can only explain the mistake by the fact that a short time ago two eminent surgeons and Dr. Hicks were suffering from poisoned wounds, but they were not associated; and that one surgeon, a Dublin gentleman, has unfortunately since died; the other, however, has returned, or will shortly return, to active work.

THE WOOLTON CONVALESCENT HOSPITAL.

A CONVALESCENT HOSPITAL was opened on the 9th inst. at Woolton, near Liverpool, by Mr. Rathbone, M.P. The cost of erecting the building was defrayed out of a balance of £40,000 remaining from the funds contributed by Liverpool towards the Famine Fund of 1862. The hospital will accommodate about 100 patients, giving each person 1000 cubic feet of air. One portion is called the "Gladstone Hall," and was built with a sum of money collected by Lancashire working men in 1868, with a view of presenting the Premier with a testimonial.

THE CORONERSHIP OF LEICESTER.

THIS important office is rendered vacant by the death of Mr. John Gregory, after a short illness from gastric fever, at the age of seventy-two. He held the office for thirty-six years. It is to be hoped that advantage will be taken of this vacancy to secure the election of a medical man. We do not maintain that medical coroners are perfect; but they perceive much more quickly than others the points of interest and importance in any given case, and more readily succeed in bringing them to light.

THE INDIAN MEDICAL WARRANT.

A NEW Warrant has been published in the *Gazette* of India for the Indian Medical Service. The document, which bears date May 10th, 1873, is to be substituted for the Royal Warrant of January 13th, 1860. The only important change introduced into the present Warrant consists in an alteration of the titles of the medical officers, that of assistant-surgeon being abolished. The grades are henceforth to be four in number—viz.: 1, Surgeon-general; 2, Deputy surgeon-general; 3, Surgeon-major; 4, Surgeon. These changes were rendered necessary on account of the recent reorganisation of the British Medical Service.

STRUCTURE OF EPITHELIOMA.

PROF. BIZZOZERO of Pavia contributes an account of the microscopical structure of an epitheliomatous tumour, removed from the cheek by Prof. Mazzuchelli. Microscopical investigation exhibited a wide-meshed plexus of connective tissue, forming a stroma, in the meshes of which were numerous epithelial cells. The cells lying near the trabeculæ were often arranged perpendicularly to the latter, whilst the portion of the remainder was irregular. A few

prickle and ribbed cells were also found; and, in addition, which is a point of interest, numerous amœboid cells, which, on the warmed stage, exhibited lively movements. They contained from two to four small nuclei. The arrangement of the blood-paths in the tumour was also peculiar, for it was found that the epithelial cells were separated from the trabeculæ of connective tissue by lacunar spaces lined by flat endothelium resembling the lymph spaces of some acinous glands.

PRESENTATIONS.

A FAREWELL dinner and testimonial were lately given to Dr. T. N. Trew, of Aspley Guise, on the occasion of his leaving the neighbourhood and relinquishing the practice of his profession.

On Monday, the 11th inst., Dr. George Wilson, late medical officer of H.M. Convict Prison, Portsea, and recently elected medical officer of health for the combined districts of North Warwickshire, was entertained at a farewell dinner at the Queen's Hotel, Southsea. We understand that there were seventy-six candidates for the sanitary appointment conferred on Dr. Wilson.

THE Metropolitan Asylums Board, at their last meeting, received a communication from the Local Government Board on the subject of receiving, if occasion for it should arise, patients suffering from cholera into their hospitals at Stockwell and Homerton. As, happily, at the present time these hospitals have very few inmates, the request was favourably received by the managers, and it was remitted to the respective committees to make the necessary arrangements.

AT an inquest held a few days ago at Acton, before Dr. Diplock, a verdict of "Wilful murder" was returned against a gardener who had given a quantity of poisonous mushrooms to the inmates of a public-house. Three persons after partaking of the fungi were taken violently ill, and one of them died. A post-mortem examination of the deceased showed a highly inflammatory condition of the alimentary canal.

WE omitted to record last week that a complimentary dinner was given to Mr. Harry Leach on the 11th inst. at the Trafalgar, Greenwich, by a large number of *Dreadnought* and other friends, on the occasion of his leaving the Seamen's Hospital. Dr. Stephen H. Ward, senior physician to the hospital, presided; and the party very appropriately occupied the *Dreadnought* room of the hotel.

WHEN everything is so dear it is a change to hear of something cheap. The *Pall Mall Gazette* reports that the St. George's, Hanover-square, Union Board of Guardians have been informed by the clerk that the auditor recently disallowed a charge of 6d. in an account of 1s. 6d. for vaccination.

THROUGH the courtesy of Count van Bylandt, ambassador at the Court of St. James to the King of the Netherlands, we are enabled to furnish to the numerous applicants for employment in the Dutch East India army the conditions under which they may enter the service.

THE mortality in London last week from diarrhœa, although above the corrected average for the last ten years, showed a decline on the returns of the previous week. There were twenty-two deaths from enteric fever.

DURING the past month four head of cattle afflicted with pleuro-pneumonia were brought from Hamburg to London, and slaughtered at the place of landing.

A NOTICE has been issued by the Corporation of London, as the sanitary authority of the port of London, asking that all persons connected with or doing business in that port should forward all communications on sanitary matters to the medical officer of health for the port, at his offices in the Foreign Cattle Market, Deptford, S.E.

THE following medical officers of the Volunteer service have lately passed the necessary examination at the Army Medical Board, in order to obtain the increased capitation grant for their corps—viz., Dr. Baines, surgeon, and Mr. William Keen, assistant-surgeon, 1st Middlesex Engineer Volunteers.

THE deaths registered during the past month in the eight chief towns of Scotland amounted to 2483. Of these, 542 were due to zymotic disease and 194 to diarrhœa. To apoplexy 57 deaths were ascribed, and to heart disease 100. There were 9 suicides, and 1 death from delirium tremens.

SINCE the outbreak of enteric fever in St. Marylebone, orders have been issued by the sanitary authorities of the parish that the street drains are to be cleansed and deodorised every day. Dr. Whitmore has also circulated handbills containing useful sanitary rules.

WE regret to learn that considerable difficulty is experienced in obtaining a supply of water for the new baths for Clapham and Brixton. An Artesian well has been sunk to a depth of 225 feet, but as yet without coming on a spring of water.

ON going to press we received a telegram from our Paris Correspondent, stating that Dr. Nélaton's condition was about the same. The distinguished patient had passed a very restless night.

ON Saturday last, at the Brentford Petty Sessions, a man was prosecuted by the Isleworth sanitary authority for neglecting to remove a cesspool which had been condemned as a nuisance, and fined £8.

THE Guildford sanitary authority has not yet complied with the requirements of the Public Health Act by appointing a medical officer of health. We are bound to add that the health of the town is at present very good.

UP to the time of going to press we have not received any report of the occurrence of epidemic cholera in this country, and our Paris correspondent states that no cases of that disease have taken place in that city.

THE King of Bavaria, in consequence of the cholera epidemic in Munich, has ordered that, unless the malady abates, the meeting of the Chamber, which stands for September, shall be postponed.

THE Commissioners of Scientific Instruction, in their recent Report, express their opinion that the number of fellowships at the universities are excessive in number if not in value.

THE will and codicil of the late Dr. W. Tyler Smith, of 21, Upper Grosvenor-street, was proved on the 21st ult. The personalty was sworn under £10,000.

A LADY died on Wednesday last, at the house of a dentist in Brighton, while under the influence of chloroform.

THE Government has authorised the issue of Macnamara filters for the troops in Bengal.

NORTH OF SCOTLAND MEDICAL ASSOCIATION.

THE annual meeting of the North of Scotland Medical Association was held in the Medical Society's Hall, Aberdeen, on the 1st inst., under the presidency of Dr. Turner, Keith. There was a large attendance of members, who received the president's address with applause, and arranged that it should be printed and circulated. Dr. Beveridge read a very excellent paper on the diagnosis of certain obscure forms of disease of the brain, after which Dr. Mackie brought up a report of the committee on a code of medical ethics, and Dr. Ogston moved the appointment of a committee "to revise the existing scale of fees, and, if necessary, introduce a new one to replace them, so as to bring our remuneration in unison with the altered value of money, and to serve as a standard for the guidance of local societies." This was agreed to, the committee to consist of the presidents and secretaries of the local societies. The treasurer's accounts showed a balance to the credit of the association. The business of the meeting was brought to a close by the election of Dr. Harvey as president for the year 1873-4.

CHOLERA IN EUROPE.

THE returns of cholera in Italy show that there were, up to August 9th, 156 cases; of these 105 were fatal. According to an Italian newspaper, the deaths among the military from July 26th to August 8th amounted to 63, with 21 deaths. The disease has now invaded Stettin.

In Munich 100 seizures and 40 deaths occurred during the past fortnight. At Altona 26 cases have been reported; of these 22 were fatal.

A notification has been made by the Minister of Marine in the Netherlands that vessels arriving from Dantzig, Helsinborg, the Austrian and Italian ports in the Adriatic, will be subjected to quarantine. The *Madrid Gazette* has published an order declaring Trieste and the Turkish ports of the Danube to be foul. Consequently all vessels from those ports will be sent to a foul lazaretto. All arrivals in Holland from Hamburg are subjected to quarantine.

THE MEDICAL COLLEGES.

THE following award of prizes was made a few days ago:—

ST. THOMAS'S HOSPITAL.—Summer Session, 1872.—First-year students: Peck, College prize, £15; Sandford, College prize, £10; Potter, College prize, £5. Second-year student: Rossiter, College prize, £15. Physical Society's prizes: Palmer, third-year prize; Crossman, second-year prize; Poynder, first-year prize.

UNIVERSITY COLLEGE.—Winter Session.—Surgery: Gold medal, Houghton; first silver, Whittle; second silver, Gould. Anatomy and Physiology: Gold medal, Hobson; first silver, Trafford; second silver, Davies. Anatomy: Senior Class, gold medal, Pepper; first silver, Jameson; second silver, Edwards. Junior Class: Silver medal, Rees. Chemistry: Gold medal, Jones; first silver, Todd; second silver, Riley. Medicine: Gold medal, Parakh; first silver (equal), Harvey and Appleyard. Comparative Anatomy: Gold medal, Pepper. Practical Physiology: Gold medals (equal), George and Rogers; silver medals (equal), Davies and Trafford. Clinical Medicine: Fellowes medals—gold, Crocker; first silver, Davis; second silver, Eales. Junior Class: Fellowes silver medal, Elliott.

LONDON HOSPITAL.—Clinical Medicine: £20 scholarship, Kershaw. Clinical Surgery: £20 scholarship, Watson; honorarium, £15, Lang. Clinical Obstetrics: £20 scholarship, Watson. Dressers' Prizes for zeal, efficiency, and knowledge of minor surgery: £15 prizes, Collenette, Chippingdale, and Brandum; £5 prizes, Price, Snell, and Needham. Baxter Scholarships: £30, Mears; £20, Fisher. Human Anatomy: £20 scholarship, Neylan. Anatomy, Physiology, and Chemistry: £25 scholarship, Fox.

GUY'S HOSPITAL.—Treasurer's gold medal for medicine, Mr. H. Ashby; gold medal for surgery, Mr. F. T. Paul; first third-year students' prize, Mr. D. H. Forty; first second-year students' prize, Mr. H. F. Lancaster; principal first-year students' prize, Mr. J. B. Waterhouse.

CHARING-CROSS HOSPITAL.—Llewellyn Scholarship, Mr. G. Brown; Goldney Scholarship, Mr. H. A. Wickers; gold medal, Mr. G. Brown.

MIDDLESEX HOSPITAL.—The Broderip Scholarship, for the best examination at the bedside and in the post-mortem room, has been adjudged to Mr. J. J. Kirby (first), and Mr. Arthur Tomes (second).

Correspondence.

"Audi alteram partem."

THE CHOLERA CASES AT VIENNA.

To the Editor of THE LANCET.

SIR,—Your appeal in one of your leaders last month for additional information respecting the two deaths from Asiatic cholera that occurred on the 26th and 28th of June at Vienna did not escape me. One of the unfortunate ladies was my sister, Mrs. Brewster, widow of the late Dr. Brewster, of Paris; but I was not then equal to the task required of me. I feel, however, that it is my duty now to give you some further details, as my relative's death has a direct bearing on the origin and propagation of cholera, and on the questions respecting water purity raised by Sir Wm. Fergusson in his recent address.

I passed three days with Mrs. Brewster, at the latter part of last May, on my return from the south, at her residence at Versailles, and found her perfectly well. She was then fifty-one, had passed favourably through the period of life from forty to fifty, which so often tries the health of women, and seemed, as the saying is, to have taken a new lease of life. Her constitution was good; indeed she never had had a serious illness in her life. She left home early in June to go to Munich, Vienna, and St. Moritz, with a daughter aged seventeen, and a maid. Her son, aged twenty-two, was travelling in Eastern Europe, and was to join her at Vienna on the 10th June. The arrival in Vienna took place on the 9th, the family meeting on the 10th, and on the 11th they settled at the Hotel Donau, a large, new, and luxurious hotel, recently built and opened, adjoining the Exhibition. Mrs. Brewster, thoroughly acquainted with all the laws of hygiene, found fault with the water from the first day, and my nephew says that it often smelt so bad he had to put eau de cologne in it to wash. The maid and my niece had slight diarrhœa, as had many of the servants and visitors, but it was considered to be caused by the heat of the weather. The water gradually got worse, and my sister complained of it daily, in letters home, to those around, to the authorities of the hotel; and yet blindly, unaccountably to me, went on drinking it, instead of leaving the hotel, or falling back entirely on wine, beer, milk, or mineral waters. She did have recourse partially to the artificial mineral waters so common on the continent under the name of "siphon," but it was discovered later that these siphons were prepared at the hotel, from the wells which supplied the premises. On Wednesday the 25th, the hot water positively smelt bad at breakfast, and the master of the hotel was sent for. He said that they had found that one of the drainage pipes had burst and communicated with the well, but that a dozen workmen were then busy repairing the mischief. My niece had refused to drink the tea made from this water, but my unfortunate sister, although complaining, had drunk it. All that day was spent at the Exhibition, and the evening at a concert. She was perfectly well, and in overflowing spirits, as she had been all the time at Vienna. On the return home at eleven, vomiting and purging came on. This, no doubt, was the beginning of the cholerac seizure, and medical assistance ought to have been at once procured, instead of which, Mrs. Brewster, a self-reliant, courageous woman, thinking it was only a common bilious attack, sent her children and servant to bed, and remained alone in her room, ill, no doubt, all the while. When she did summon assistance, it was some time before a medical man could be

found, and he came without medicines, which had to be sent for from some distance. Thus it was five o'clock before the medical treatment commenced, and five or six hours had been lost. Already the vomiting and rice-water purging had all but stopped, the face was cyanosed, and the cramps general. The latter never ceased; she became unconscious about 12, and died at 2 P.M., fifteen hours after the first seizure.

My nephew subsequently learnt that two gentlemen had died two days before in the hotel of cholera. According to a German newspaper, which my friend Dr. Pyemont Smith, of Leeds, saw, four other persons died at the hotel the same day as my sister (June 26th), and nine more between that and the following Wednesday—that is, fourteen deaths in six days. Besides this, many servants were sent to the hospitals, and probably some of them died there; we know of one, the valet of a Parisian gentleman. The police then interfered, had the water analysed, and found it contaminated with sewage. The hotel was shut up, thus closing and stamping out this one focus of cholera.

The scientific explanation of the above facts is quite clear. Whilst the water-supply was merely contaminated by ordinary sewage in a moderate degree, those who drank it merely had diarrhœa and functional disturbance. But once it became contaminated by cholera germs, from the dejections of real cholera patients, cholera broke out with virulence, destroying fourteen persons, perhaps many more, in six days, and was only arrested by the closure of the house. Had not the publicity given to this case in *The Times* stirred up the authorities to action, hundreds of lives might have been lost.

My unfortunate sister lost her life, whilst in full and vigorous health, partly owing to defective drainage and water-supply, and partly owing to the Vienna authorities concealing the presence of the cholera. According to *The Times* correspondent, it had been in Vienna since April. Unprepared and unaware of any cholera danger, Mrs. Brewster went on drinking impure water; and when the danger came she ignored it, and thought it was only bilious diarrhœa from heat. Thus was lost the time for treatment, and when assistance was obtained it was too late.

Both the young people were attacked with choleraic diarrhœa of a severe character, and were probably saved by prompt and efficient assistance. I am now with them, watching over their convalescence, and giving them such assistance as is in my power.

I am, Sir, yours &c.,

HENRY BENNET, M.D.

Pourville, near Dieppe, Aug. 8th, 1873.

ON THE GROUSE DISEASE.

To the Editor of THE LANCET.

SIR,—I should be glad of the opportunity of saying a few words in your columns about the grouse disease, for the subject is not only one of great interest, but its investigation seems to require much more scientific study than it has yet received.

Although recent reports from Scotland reassure us concerning the wholesale destruction of birds which was feared some few months ago in many quarters, its ravages have been most disastrous, and have not only caused the loss of large quantities of eminently nutritious food, but must also bring about a good deal of temporary depreciation in the value of extensive tracts of property. Considering, then, that these effects are produced on an average every six or seven years, and that a moor frequently only recovers its full stock in sufficient time to be again decimated, it is surely not too soon that some systematic attempt were made to unravel the intricacies of this mysterious disease. Dr. Cobbold has long since exploded the tapeworm theory, and future research can only be pushed towards the root of the matter by first clearing up the following points.

1st. Is there any essential connexion between the disease and meteorological conditions, more especially such as might affect the heather crop; or, in other words, does it depend on over-stocking, or under-feeding, or on the use of unwholesome food?

2nd. Is it infectious in its nature, spreading by individual contact, or by the excretions of the sick, or does it transmit its influence by so-called epidemic waves, travelling rapidly from place to place?

3rd. What are the precise pathological conditions discovered after death?

My own conviction strongly leans towards the theory of an infectious fever, communicable both by contagion and by the evacuations, and springing up from some unknown cause in various and widely scattered foci. The rapid emaciation, dulness of plumage, and predilection of the affected birds for the neighbourhood of water, all seem to point in this direction, and the extraordinary rapidity with which the pestilence spreads is sufficient proof that something more is present than a mere individually exhausting pathological process.

Granting, then, for the sake of argument, that I have established these ideas, I shall go on to my next proposition, which is the absolute futility of endeavouring to stay the progress of such epidemics by any sort of treatment directed to the disease itself. We all know that the utmost refinements of science were powerless to arrest the cattle plague, and that England was only saved from national disaster by the vigorous application of the poleaxe; and although we cannot place a cordon around our grouse-moors, nor exterminate every diseased covey with unerring precision, something may undoubtedly be attempted in the way of prevention, and this is what I would venture to suggest:—When the disease breaks out in any particular district, let all the adjoining proprietors combine and obtain a mandate from the sheriff to kill birds out of season. Having procured the requisite authority, let each laird cause his grounds to be carefully worked over by a close hunting dog, and let every bird be at once destroyed which shows any symptoms of feebleness or poor condition. A little practice would soon make it easy enough to detect the earlier stages, and if the diagnosis is confirmed by a rough post-mortem examination, let the rest of the covey be followed up and exterminated. In this way the various centres of infection might readily be stamped out, for at the time of year when the disease first appears the various coveys never rise with one another, nor do they ever stray to any extent from the limited piece of ground which they have selected as their home. Nor can the advantage be overlooked of thus getting rid of those weakly birds which would inevitably have provided their miserable offspring as a fitting nidus for the infective process. Let all dead birds be at once picked up and destroyed either by burial or burning, let all wells and sources of water-supply be at once carefully examined and cleansed, and let all droppings, so far as possible, be disinfected with carbolic acid or other powerful disinfectant.

It is, of course, too late to put any such plan as this into operation during the coming season, but I feel convinced that, crude although it may be, it contains at least the germs of truth; and I must sincerely hope that when the opportunity again occurs for its consideration we may find a firm basis of scientific research on which to rest our preventive measures.

I am, Sir, your obedient servant,

ROBERT FARQUHARSON, M.D.

Brook-street, Grosvenor-square, Aug. 11th, 1873.

P.S.—Since writing the above I have perused my friend Dr. Cobbold's letter and pamphlet on the grouse disease, and find that he has now changed his views respecting the parasitic theory. Being unwilling to import any controversial element into the simple statement of my opinion on this subject, I shall only append my tribute of admiration for the very valuable discovery with which Dr. Cobbold has recently enriched science.—R. F.

AFFECTABLE AND INFECTABLE SUSCEPTIBILITY OF MILK.

To the Editor of THE LANCET.

SIR,—Through the loss of notes on this question, made several years since in consequence of my own family suffering from an otherwise unaccountable series of gastric attacks, sometimes typhoid, and once attended with malignant thrush, I must trouble you with a letter of suggestion, lacking, as I now do, the data on which to write a paper on the above subject.

It is something like fourteen years since my attention was painfully called to the putrid element to be met with too often in London milk. My own senses of smell and taste are, unfortunately, morbidly great for my comfort. To this I attributed the puking sensation arising instantly I smelt some London milk. In consequence of this, and of other members of my family not perceiving the mawkish sickening odour I did, I willingly attributed my revulsions of taste and smell to my own morbidness, until on one occasion of meeting, in the mawkish odour, with a distinct evidence of putrescent odour, I was induced to more carefully inquire into the facts—firstly, as to the cleanliness on the part of our servants and of the jugs used, and then as to the condition of the milk as it came from the "milkman." The milkman delivered the milk possessed with the odour of putrescence, the milk itself presenting no unnatural look, yielding also a fair result to the lactometer. The milkman had the milk from his own cows, pent in a small crowded shed. I accused them of possible scrofula, and ceased to have their milk. My family were sent to the seaside and recovered health, the incidence of causation of their gastric attacks and fevers being forgotten or given up.

Some time afterwards I was called to the house of the milk-vendor to a case of sudden illness, from faintness and gastric pains, so far as I now recollect. The odour of the house was such as follows a day after a cesspool has been emptied. I complained, "It was quite poisonous," to which was answered, "It was dreadful—from the drains; but the landlord would do nothing, and they could not. They were sure it was not from want of washing, &c." This seemed correct, if appearances might judge the case. I was struck by the appearance of eight or nine open pans of milk standing on chairs; so mawkish the odour that I could not tolerate it. The sink was open. Their water-supply from the waterworks. The house was drained into a cesspool to which the sink had no alternative but go. The drain through the house, as was subsequently proved, was choked—eighteen feet full length—and was virtually eighteen feet of superficial cesspool. I arrived at the conclusion that the milk was affected by the odorous poison of the atmosphere, wherein lay the cause of the putrescent odour of the milk that had entered my nursery when I was supplied by this dairy.

The short street this house was in was proverbial for fevers, and every epidemic that showed up in season. The drainage of it, after much trouble, was improved, fevers ceased in great measure, and my inquiry into the milk as a disseminator ceased after I had done the best I was able in ascertaining the affectability of milk—under given circumstances of temperature—by putrescent odours.

A little was exposed in a saucer all night near a sink that had the trap removed. In the morning an odour mawkish and unnatural to milk was discovered by my sense of smell, but others thought it was my fancy.

The late outbreak of fever through infected milk has aroused the slumbering theory—Milk is an affectable body, and, being an animal substance or product, is essentially susceptible of affection for putrefying causes, like as veal is, and especially so when there is a thundery atmosphere. That milk is attractive of electrical conditions, or, if it be preferred, is susceptible to them, is too patent to need the assertion they are so; and so is veal—a meat fed on milk—remarkably so, and to the extent of utter decomposition of the fluids of the meat in a few hours, causing an attraction to flies that collects them from all parts of the place. Taking all these things into account, it has appeared to me a most feasible conclusion: Milk is affectable by atmospheric poison, and is capable of incubating the worst morbid principle, and of becoming thereby an infectant of those who drink it.

It requires much experiment to prove putrid water, unless it has had such time as never is possible between milking the milk and the sale and use of it. Was it the infectious element *per se* that affected the milk which affected the Marylebone families?

The temperature of newly-drawn milk, given certain atmospheric conditions and sewage odour, favours its affectability by a tainted atmosphere, especially if the latter come up in volume from an open sink into the dairy in the night time.

If zymotic causes follow currents and deposits, where susceptibility is suitable, in tanks of water, why not on open dairy milk-pans of milk, if the dairy be close to open cesspools the holes and depressions are made into in every farmyard?

Farmers for the most part, if they live long, are windy or pot-bellied—a fact I have long since attributed to gastric poisoning by the open cesspool system of their premises. Again, when the hot season comes the supply of water is reduced, and cows are driven to drink from ponds that are little less than sewage or bilge-water reservoirs.

I have ventured to send you, Mr. Editor, these views of the case in the hope they have hints which may be of use to those scientific men engaged in the milk inquiry.

I am, Sir, yours truly,

August, 1873. H. WILLINGTON.

NAVAL MEDICAL SERVICE.

To the Editor of THE LANCET.

SIR,—A question was asked and a reply received in the House of Commons recently which very intimately and deeply affects the interest of a large number of our profession, and more particularly that portion of it whose future is as yet undecided, and who, but just "passed," are inclined to consider the various inducements which a civil, military, or naval appointment presents. For the last I can only say that most assuredly none but "fools would rush in" did they know the so-called "regulations," with which most young surgeons on entering are unfortunately perfectly unacquainted. Who among us would dream that, like Sinbad, he was taking "an old man of the sea" on his back on becoming an officer in Her Majesty's service?

The question, as you are aware, was put by Sir Dominic Corrigan as to whether Government had power to retain the services of a naval surgeon *nolens volens*, and to coerce him to serve when his best interests, better prospects in life, or, as often happens—and notably in a recent case to my knowledge—family reasons of a most serious and pressing nature, urge him to withdraw from the service.

We are told that since the Government have had to "instruct" their naval surgeons, they possess an interest in them—have, in fact, a claim on them. What is this "instruction"? A few months spent at "Netley"—months spent as and how our junior naval surgeons choose with the exception of a few hours' duty now and then. And for this the Government, or those acting and speaking for it, would ignore an arduous course of study extending over many years in the daily routine of hospital life, and, still more, our universities and examining bodies.

Do four, five, or six years' study, and clinical instruction under all masters, go for nothing till happily (?) climaxed by three or four months' residence at Netley? Yet this is the answer to Sir D. Corrigan: "They have been under instruction; they have taught them"!

Yet another portion of this same "answer" puzzles me still more. It says that when naval surgeons have shown a proficiency, or some claim to have their resignation received, the matter is "considered." How is this? While a man is, according to their account, inefficient, he must be retained. Let him be considered a proficient, and he may escape. Is this common sense? Do the Government merely admit the less experienced members of the profession into the service that they may, *mirabile dictu!* educate them anew? But still more, I ask what is the status of proficiency, or what the degree of excellence which *entitles* a surgeon to resign? Why, our naval brothers are in an inferior position in this respect to privates in the army. These can be "bought" out. A friend of mine offered to refund to Government double, treble his expense at their boasted Netley—a man of high acquirements and superior professional knowledge; yet he is gone abroad. His immediate answer was "Embark!" No member of the profession can view this as an individual case, nor is it an individual case, as will appear before very long. Unfortunately it has come on at the end of the Parliamentary session. From my own experience I can say that men who have been *forced* to go abroad recently expect that the subject will be kept alive, and trust principally to the columns of your paper to keep before the profession and the public the fact that a number

—a large number—of educated gentlemen, men who have passed through university and college courses with honour and distinction, are *compelled* to adhere to a service which, under existing regulations, they detest, and a life which they find most uncongenial, as a rule, for reasons I need not state. It is incompatible with all sense of justice, and requires the deepest consideration by the profession.

"*Vestigia nulla retrorsum*" is at present the suitable motto for our naval surgeons. Must it remain so?

I am, Sir, yours faithfully,

Ventnor, Isle of Wight, August, 1873. JOHN M. HART.

SERVICE IN THE DUTCH INDIES.

To the Editor of THE LANCET.

SIR,—In consequence of a notice which appeared in a late number of THE LANCET respecting the engagement of medical officers for military service in the Netherland East Indies, and in which notice reference was made to this Legation for information on the subject, so many applications have been received that it has been found impossible to reply to each individually; I therefore take this channel of conveying to the persons interested, that foreign gentlemen, duly qualified for medical practice in their own country, can be engaged in this service, on the following conditions:—

The candidate must produce satisfactory certificates or testimonials as to moral character; he must not be more than thirty-five years of age, and must be able to speak Dutch, French, or German, in order to be able to undergo a short *viva voce* examination. The engagement is for not less than five years, and may be prolonged if desired. The successful candidate will have the rank of first lieutenant on the staff, with the pay of 2250 guilders (about £185) per annum, with prospect of promotion. A first-class passage to India is granted by the government, and a premium of 4000 guilders (about £330).

Applications and testimonials, accompanied by the address of the candidate, are to be sent to the Chief of the Medical Service of the Netherland army, the Hague.

I have the honour to be, Sir,

Your obedient servant,

C. DE BYLANDT.

Netherland Legation, 40, Grosvenor-gardens, August 18th, 1873.

THE AUTUMN MANŒUVRES, CANNOCK CHASE.

(*From our own Correspondent.*)

ON Friday, the 15th inst., several regiments arrived at the camp of instruction, and by the intense heat those who marched from the railway station to the camping-ground were made to feel and show the deficiencies of the present military dress. The constant removal of the shako and the energetic mopping of the forehead bespoke only too truly the totally unsuitable nature of the head covering, and was the evident result of the distressing pressure of the shako plate and ball upon the brow and temples. The almost livid face and congested cervical veins pointed unmistakably to the throat constriction produced by the dragging of the knapsack-straps upon the collar of the tunic.

The results of the late war display most prominently how much may depend upon the power of one body of men to overmarch another—how a bloodless victory may be thereby achieved, and combinations of the most vital importance to the enemy completely frustrated; and yet in a race with so much at stake English soldiers are handicapped with an irritating weight on the forehead and a smothering compression of the throat. No doubt for the limited exertions of the parade-ground the dress offers no practical obstacle; but if parade experiences were a trustworthy test of efficiency, wherefore the expense of Autumn Manœuvres? It is said that a new head-dress has been sanctioned, and should it obviate existing defects it will be a very large tribute to the value of lessons taught by previous Manœuvres. As to the tunic collar, so long as weighted straps pass over the shoulders they must necessarily drag the cloth so as to force the neckband against the throat. These straps are, however, unavoidable, no matter how the form of the knapsack may be modified. The only mode of relief, therefore, lies in alteration of the collar. To leave the neck uncovered would be to outrage military feelings and to incur the risk lately attributed to sailors' dress, of producing frequent sore-throat. Thus the compromise would seem to be to allow the cloth of the tunic to reach only to the upper edge of the sternum, and to protect all above that by a uniform neckcloth, which, being unattached, could not be influenced by the dragging of the straps, and might be worn or removed according to the requirements of duty or of weather. There can be no reasonable doubt that a number of men in whom the cerebral circulation was thus facilitated must at the end of a long march on a hot day, other things being equal, be far in advance of and less fatigued than those equipped in the present fashion, and of the value of the advantage gained thereby there can be as little question.

The ground chosen for encampment at Cannock Chase is, in a sanitary point of view, most suitable. Clusters of tents stud the sides of the heather-covered hills, and are placed upon a soil which, at a depth of a few inches, becomes a natural filter of sandy rubble. During three out of the four nights from Friday to Tuesday rain fell heavily, and yet the ground was not softened. The streams issuing from the valleys of the undulating hills have been used for the water-supply, and the arrangements for its diffusion and protection from impurity have been most carefully carried out.

A few cases of diarrhœa have occurred, but were easily checked, and evidently attributable to chill on first sleeping on the ground. These would probably have been averted by the issue of flannel cholera belts to the men to be worn during the night. On the whole, everything seems to promise a healthy time.

The usual game of "send the fool farther" has been played to some extent between the "Control" and other offices, but without serious inconvenience; and there has been nothing yet to test the powers of supply beyond the necessities of a standing camp within easy distance of railway communication.

Near Rugeley, August 19th, 1873.

BIRMINGHAM.

(*From our own Correspondent.*)

BIRMINGHAM during the past quarter has had a rather high death-rate—24·74. The total number of deaths from zymotic diseases amounted to 397, and towards these deaths scarlatina contributed the greatest number, 118. Small-pox, which in the previous quarter had been very fatal, caused in this 30 deaths out of 171 cases of that disease. Twenty of the 30 cases occurred in vaccinated and 10 in unvaccinated cases.

Dr. Hill, the medical officer of health, reports "that the well water of the town is generally in an unsatisfactory state. In cases where there had been reason to suspect contamination of the well water used in infected districts, he had analysed it, and in every case had found it to be polluted to a dangerous extent." Of 14 samples of milk submitted to him by the inspector of nuisances, 6 were adulterated with water in proportion of from 14 to 30 per cent., and 5 were adulterated with skimmed milk. In 4 of the cases, the milk-sellers have, after prosecution, been fined 20s. and costs.

The Sewage Committee of the Town Council are increasing the size of the sewage farm at Saltley, and are actively pursuing General Scott's scheme for the conversion of sewage into cement. A sensible proposal has been made to form a sewage commission for the whole of the district draining into the river Thame and its tributaries, but it is to be feared that, unless carried out at the expense of the counties as well as of the large towns through which the river flows, it will prove a very costly affair.

Dr. Ballard has been strongly animadverting on the conduct of the sanitary authorities at Stourbridge, Brierley-hill, and Quarry Bank, and he again tells them that the

sanitary administration of the district is most defective. "No one," he says, "passing through the principal street of Stourbridge, which, being under public view, is decently kept, would imagine the abominations which have been permitted to exist within a few yards' distance, in the bye places where the poorer class of inhabitants are compelled to dwell." Defective drainage, great accumulations of filth, and sewage percolations into wells seem to be the rule throughout the district.

The Birmingham Medical Benevolent Society is evidently prospering. It numbers 174 members, and its total receipts for 1872 were £3229. Twenty-two applications for grants had been entertained during the year, and the sum of £345 distributed. At the recent anniversary meeting, Dr. Baker, of Leamington, was appointed president for the ensuing year, and Dr. Wade, the late chairman, and Messrs. Pemberton and Solomon, were elected directors of the Society.

The new out-patient department of the Queen's Hospital is rapidly approaching completion, and will shortly be opened. The late Miss Food has bequeathed £674 specially for the purpose of furnishing the building.

Birmingham, August 18th, 1873.

PARIS.

(From our own Correspondent.)

As you are all aware, Dr. Nélaton is suffering from most severe heart disease, and is in such a conditon that his friends have lost all hope. Indeed, several of the journals here reported his death two or three days ago, and published obituary notices of the illustrious surgeon. It is more than six years since Nélaton began to feel heart symptoms, and no doubt the extraordinary pressure of professional work, coupled with the recent disasters of his country and the overthrow of the Empire, contributed much to break down his health. Still, with strict attention to dietary, and regular habits, he managed to get on well enough to continue to do some professional work, till about a month ago, when his health failed entirely, and he was obliged to go into the country. He became much worse, however, and returned to Paris on the 10th inst. His ordinary medical attendant is Dr. Moutard Martin, of Beaujon Hospital, but there have been several consultations among the most noted physicians and surgeons of this city. The bulletins published since the 12th are very alarming. On the 13th his condition was stated to be "still very grave"; on the 14th "the night had been a little more calm"; on the 15th, "he had gained a little strength and passed rather a good night"; 16th and 17th, same condition; 18th, "weakness was extreme"; same bulletin on the 19th. This morning (20th) when I called to inquire, his condition was said to be exactly the same—namely, extreme prostration. Turning over the pages of the book which is kept for the inscription of visitors' names, and which is covered with signatures, I noticed the autographs of some of the most illustrious people here in politics, finance, science, arts, &c., and saw the names of Thiers, Barthelemy, St. Hilaire, Marshal Canrobert, Pereire, General Bourbaki, Comte Serrurier (for the Society of Help to the wounded), &c. A great many names are followed by the words "a grateful patient." The illness of the renowned surgeon is a subject of extreme interest and sympathy here, not only in professional circles, but with the public at large. The papers publish a daily bulletin of his health, and when fears of his death are mentioned the subject is spoken of as if it would be a real national loss. The name of Nélaton, especially since his voyage to Caprera, and extraction of Garibaldi's bullet, had become most popular, and his reputation was elevated and heightened by the fact of his being the only practising medical man made a Senator and Grand Officer of the Legion of Honour during the time of the Empire. He is considered here and abroad to be the highest representative of French surgical science, and there is no doubt that, as such, his death would be a matter of universal regret, and his loss very severely felt. Nélaton inhabits a large and most elegant hotel, of which he is the proprietor, which he built a few years ago when he was in his zenith of professional success. It is situate at the corner of the Rue François 1er and the Cours la Reine, opposite the quay, and quite near the Champs Elysées, the most fashionable quarter of the town. Dr. Nélaton's private apartment is on the first floor. His wife and children are with him. Except his medical attendants and one or two friends, no one is admitted to see him, though visitors daily flock to his house.

As yet no cases of cholera have been reported, either in town practice or in the hospitals. As is usual at this time of the year, there have been a few cases of very severe diarrhœa, belonging to the type of cholera nostras. Last week there were three such cases. The week before there had been none, whilst the preceding one had numbered four. Cases of diarrhœa manifesting a severe type are very prevalent, especially among children. On the whole, the sanitary condition of Paris may be said to be about what it always is at this time of the year, with an increase in cases of gastric disorder, making a notable figure in the weekly register published by the municipal authorities.

The authorities are exerting a careful surveillance in respect to the carrying out of various sanitary measures. In the hospitals strict attention is being paid by the directors and *personnel* to the various measures of precaution which are generally adopted at this season of the year. The number of patients in the wards is diminished by sending the convalescents to special asylums. All the night vases are immediately emptied. The patients only get a limited quantity of drinks; no unripe or over-ripe fruit is allowed to be introduced into the wards; and the food allowed to the inmates is chosen with particular care. At the same time the number of *infirmiers*, and of the *personnel* generally, has been increased, so that the proper ventilation and cleaning of the wards may be ensured.

Paris, August 20th, 1873.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Member was elected a Fellow of this College at a meeting of the Council on the 14th inst.:—

Wheeler, Thomas Rivington, The Ferns, Sundridge, Kent.
(Diploma of Membership dated May, 1843.)

UNIVERSITY OF LONDON.—The following candidates have passed the first M.B. examination:—

FIRST DIVISION.—Harry Beecham Briggs and Ernest Wm. White, King's College; Lewis John Hobson, Augustus Joseph Pepper, and Thomas King Rogers, University College; Arthur Henry Jones and Cyril Lloyd Jones, Guy's Hospital; Charles Arthur Mercier, London Hospital.

SECOND DIVISION.—Paul Morgan Chapman, Leander Starr Jameson, Bernard Mathias Simon Roth, William Joseph Seward, and Geo. Henry Voelcker, University College; Thomas Robert Hood Clunn and William Henry Lamb, Guy's Hospital; Eugene Crétin, St. Bartholomew's Hospital; Edward Joshua Edwardes, St. Mary's Hospital; John Gatchell Hancock, King's College; Rhinallt Navalw ap Joan Pughe, Liverpool Royal Infirm. School of Med.; Geo. Edw. Williamson, London Hosp.

EXCLUDING PHYSIOLOGY.

FIRST DIVISION.—John Christian Ferrier, Guy's Hospital.

SECOND DIVISION.—Richard Legg Batterbury and Edw. Marriott Cooke, King's College; Herbert Duke, Guy's Hospital; Charles Walter Evans, John Geoffrey Langley, W. Whitchurch Taunton (B.Sc.), and Benjamin Arthur Whitelegge, University College; John Benjamin Heilier, Leeds School of Medicine; Arthur Jermyn Landon, St. Bartholomew's Hosp.

PHYSIOLOGY ONLY.

SECOND DIVISION.—Richard Hickman, St. Mary's Hospital; Geo. William Homan, King's College; George Hawson Keyworth and James Arthur Rigby, Guy's Hospital.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Aug. 14th:—

Boodle, Robert Maxwell, Park-terrace, Highbury.
Emmerson, William Lindsay, Seaton Colliery, Durham.
Satchell, Walter Alfred, Argyll-road, Kensington.

The following gentlemen also on the same day passed their Primary Professional Examination:—

Henry Bartlett and James T. W. S. Kellard, Guy's Hospital; Frank de Beauvamp Collenette, London Hospital.

ROYAL COLLEGE OF SURGEONS OF IRELAND.—At the quarterly examination held on the 16th ult. the following passed their preliminary examination in Arts:—

FIRST CLASS.—Hugh Kennedy, Eugene J. O'Donovan, Maurice Ford.

SECOND CLASS.—Terence J. Sweeny, James Mackey, Joseph Meehan, John A. French, George Scaranche, Thomas C. Flannery, Joseph J. Sharkey, Alfred L. Montgomery, Thomas R. Naughton.

UNCLASSED.—John P. Acheson, Thomas E. Atkins, Joseph A. Beattie, Anthony L. Blake, Augustus J. Coghlan, Patrick O. Considine, Hubert

K. Costello, Frederick H. Daly, John P. Devlin, James J. Edge, Arthur Finigan, Arthur Greenwood, Edward M. Hewetson, William J. Hunter, Medicus Johnson, Thomas Lambert, Joseph G. M'Can, Laurence J. O'Neill, George Westby.

CHOLERA has appeared in several districts of Bosnia.

LAST week a death from sunstroke was registered in the Eastern Counties.

A PARLIAMENTARY RETURN just issued shows that 97 deaths from privation took place in the metropolis in the year 1872. The majority were infants.

MR. ALEXANDER COVENTRY, L.R.C.S. Edin., late a medical officer to the Rochdale Union, has obtained a superannuation allowance of £50 per annum.

BEQUESTS &c. TO MEDICAL CHARITIES.—Mr. Henry Cooper, solicitor, bequeathed £3000, and General Edward P. Buckley, of New Hall, Nunton, £100, to the Salisbury Infirmary. Miss Mary Downing Nesbitt has bequeathed the sum of £50, and Mr. Archdall has given £50 to the Adelaide Hospital, Dublin.

THE MEDICAL INTERNATIONAL CONGRESS OF VIENNA.—This congress will take place from the 2nd to the 10th of Sept. next, the most liberal arrangements having been made as regards foreign visitors. There are six principal questions to be discussed. (1) Vaccination; (2) syphilis and prostitution; (3) cholera and quarantines; (4) a universal pharmacopœia; (5) freedom of practice in all countries for qualified men; (6) hygiene of large towns.

THE PUBLIC HEALTH ACT, 1872.

[In the following list the letters "P.S.D." signify Port Sanitary District, "R.S.D." Rural Sanitary District, and "U.S.D." Urban Sanitary District.]

Districts, and Medical Officers.	*Salary per ann.*	*Area in Acres.*	*Population.*
Alderbury, R.S.D.—Dr. James H. Gordon	£50	54378	13643
Alfreton, U.S.D.—Dr. Edward Gaylor	£10	1957	3080
Amersham, R.S.D.—Mr. Benjamin A. Brickwell	£100	44660	16987
Atherstone, R.S.D. { Mr. Thomas Hansford / Dr. John A. Lycett } ...	£80	28111	11859
Axbridge, R.S.D.—viz.:			
Division No. 1.—Mr. Charles Wade	£50	30086	5800
" 2.—Mr. Henry W. Collins	£50	24404	7236
" 3.—Mr. Joseph Ford	£50	34770	8323
" 4.—Mr. Alworth M. Baylife ...	£50	23460	6884
Bedwelty, R.S.D.—Mr. Thomas G. Anthony ...	Not fixed	27991	51742
Billesdon, Blaby, Hinckley, Lutterworth, R.S.Ds. combined { Dr. W. E. Back, Leicester }	£400		
Melton Mowbray, U.S.D. ...		2822	5003
Blaby, R.S.D.—combined with Billesdon R.S.D. and others.			
Bridgwater, R.S.D. } Mr. Francis J. C. Parsons...	£150	8519	34874
Bridgwater, U.S.D. }			
Brierley Hill, U.S.D.—Mr. H. D'Arey Ellis ...	£50	1027	11047
Bromley, Cranbrook, Maidstone, Tenterden, Tonbridge, R.S.Ds. / Tenterden, Tonbridge, U.S.Ds. — Dr. Charles O. Baylis...	£800	200000	99000
Broughton, U.S.D.—Dr. Walter H. Paterson ...	£5	7000	1300
Castleford, U.S.D.—Dr. James H. Simpson ...	£30	...	6000
Chesterton, R.S.D.—Dr. John A. Ramsay	£120	77029	27917
Folesbill, R.S.D.—Mr. John Orton, jun.	£50	19389	17179
Guildford, U.S.D.: Horsley Division—Mr. Joseph H. Sutcliffe — £10 & 10s. 6d. for each inspection of nuisance.		7161	1531
Hexham, R.S.D.—Dr. Jas. M'Grigor Maclagan...	£300	196498	27209
Higher Bebington, U.S.D.—Dr. Samuel Spratly	£20	893	2865
Hinckley, R.S.D.—combined with Billesdon R.S.D. and others.			
Islington.—Dr. C. Meymott Tidy	£250	3127	213749
Leeds, U.S.D.—Mr. George Goldie...	£400	...	270000
Lillington, Milverton, Rugby, Warwick, U.S.Ds. / Meriden, Rugby, Solihull, Warwick, R.S.Ds. — combined.—Dr. Geo. Wilson	£800	236055	86080
Little Woolton, U.S.D.—Mr. William Prowse ...	£20	1450	3460
London, P.S.D.—Mr. Harry Leach	£400 till March 25th next. — From Teddington Lock to the Nore Light.		
Lutterworth, R.S.D.—combined with Billesdon R.S.D. and others.			
Marlborough, U.S.D.—Mr. Alfred Risdon ...	£21	198	3000
Melton Mowbray, U.S.D.—combined with Billesdon and others.			
Meriden, R.S.D.—combined with Lillington U.S.D. and others.			
Merthyr Tydfil, U.S.D.—Mr. Thomas J. Dyke ...	£80	41000	15000
Milverton, U.S.D.—combined with Lillington U.S.D. and others.			
Newcastle-upon-Tyne, U.S.D. { Mr. H. E. Armstrong... and as Superintendent of the Fever Infirmary }	£350 / £100		
Nuneaton, R.S.D. { Mr. Edwin Pescock ... ... / Mr. Albert N. Cookson ... }	£7 10s. / £5	4270 / 1499	514 / 208
Nuneaton, U.S.D.—Mr. Edwin Peacock	£30	7520	7607
Penrith, R.S.D. } Penrith, U.S.D. } Dr. James D. Robertson ...	£300	181535	23738
Pershore, R.S.D.—viz.:			
Eckington Division—Mr. J. B. Greswcock ...	£30	13053	3120
Fladbury " Mr. Martin Woodward	£30	9228	2468
Grafton Flyford Division } Mr. J. G. Rusher {	£30	5704	903
Upton Snodsbury " }	£30	7421	2173
Pershore Division—Dr. Samuel W. Smith ...	£30	14416	5412
Ripley, Derbyshire, U.S.D.—Dr. Edward Gaylor	£10	11211	5039
Rugby, R.S.D. } combined with Lillington U.S.D.			
Rugby, U.S.D. } and others.			
St. George, Bristol, U.S.D.—Mr. Henry Grace ...	£30	1831	19000
St. Asaph, R.S.D.—Mr. John Lloyd Roberts ...	£60 till March 25th next.	84247	19000
St. Marychurch, Tormoham, } U.S.Ds. combined—Mr. S. Rhind	£400	...	28000
Solihull, R.S.D.—combined with Lillington U.S.D. and others.			
Staines, R.S.D.—Mr. Louis F. Lundy	£100	22591	15538
Sudbury, R.S.D.—Dr. John S. Holden	£100	77006	24893
Teignmouth, U.S.D.—Dr. Wm. Charles Lake ...	£50	1074	6704
Thirsk, R.S.D.—Dr. John H. Buchanan	£50	64893	12188
Tormoham, U.S.D.—combined with St. Marychurch U.S.D.			
Truro, R.S.D.—Mr. William P. Hugoe	£180	84700 *	30649
Warwick, R.S.D. } combined with Lillington			
Warwick, U.S.D. } U.S.D. and others.			
Whitwood, U.S.D.—Dr. James H. Simpson ...	£15	...	4000
Wilton, U.S.D.—Dr. Thomas J. Bennett	Nil	1700	1871
Winchester, U.S.D.—Mr. Thomas C. Langdon ...	£100	...	19000
Wycombe, R.S.D.—viz.:			
Division No. 1—Mr. Henry Hayman	£50	39770	10499
" No. 2—Mr. Thomas Warren	£50	33778	11424

Medical Appointments.

BURROUGHS, E. F. H., L.R.C.S.I., has been appointed Medical Officer for the Middlezoy District of the Bridgwater Union, vice Auter.

BRUCE, W., M.D., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Parish of Thurso, Caithness-shire, vice Mill, deceased.

CLAY, J. H., L.F.P. & S. Glas., has been appointed Medical Officer for the Cromford District of the Bakewell Union, Derbyshire, vice Cantrell, resigned.

CONOLLY, S. F., L.R.C.P.Ed., M.R.C.S.E., has been appointed Assistant Medical Officer to the Derbyshire Lunatic Asylum, Mickleover, vice Courtenay, appointed Resident Medical Superintendent of the Limerick District Lunatic Asylum.

DAVIES, J., M.R.C.S.E., has been appointed House-Physician to the Westminster Hospital, vice Fosbroke, resigned.

DUNN, C. B. N., M.R.C.S.E., has been reappointed Medical Officer for the Crich District of the Belper Union.

ELLIOT, R., M.D., has been appointed Medical Officer of Health for the Carlisle Urban and Rural Sanitary Districts: £150 per annum for three years, and £120 for one year, respectively, and private practice.

FENTEM, P. S., M.D., M.R.C.S.E., has been appointed Public Vaccinator for the Bakewell Vaccination District of the Bakewell Union.

GARLAND, E. C., L.R.C.P.Ed., M.R.C.S.E., has been appointed Medical Officer for the West Coker Friendly Society, Yeovil.

GERALTY, J., L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Spiddal Dispensary District of the Galway Union.

HARVEY, G., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer and Public Vaccinator for the Wirksworth District of the Belper Union, vice Cantrell, resigned.

HUCHINSON, A., M.D., has been appointed Medical Officer, Public Vaccinator, and Registrar of Births &c., for the Kilkeel Dispensary District No. 2 of the Kilkeel Union, Co. Down, vice Reid.

IMAGE, F. E., M.B., L.R.C.P.Ed., has been appointed a Surgeon to the Suffolk General Hospital, Bury St. Edmunds, vice W. E. Image, F.R.C.S.E., resigned, and appointed Consulting Surgeon.

JONES, M., L.R.C.P.L., M.R.C.S.E., has been appointed Medical Officer for the Aberystwyth District of the Aberystwyth Union.

KEALY, J. L., L.R.C.P.Ed., L.R.C.S.I., has been appointed Medical Officer to the County Gaol, Drogheda, vice Pentland, deceased.

LITTLE, P. C., F.R.C.S.I., has been appointed Medical Officer to the Irish Mercantile Clerks' Association, Dublin.

MAHON, G. A. D., M.R.C.S.E., has been appointed Medical Officer and Public Vaccinator for the Apsley Guise District of the Woburn Union, vice Trew, resigned.

MATHESON, F., M.B., C.M., has been appointed Surgeon and Apothecary to the Loyal United Brethren Benefit Society, Maiden-lane, Covent-garden, vice Keele, resigned.

NANKIVELL, C. A., M.B., has been appointed Physician's Assistant at the Wolverhampton and Staffordshire General Hospital, vice Carter, resigned.

OLIVER, W. H., L.R.C.P.Ed., has been appointed Medical Officer for the Norton District of the Stockton Union.

PENRICE, D. S., M.R.C.S.E., has been appointed Medical Officer for District No. 3 of the Norwich Union, vice Summerhayes, resigned.

PETTIGREW, Dr. B., F.R.S., has been appointed Lecturer on Physiology at the School of Medicine, Surgeons' Hall, Edinburgh.

SLOAN, J., M.B., C.M., has been appointed Medical Officer and Public Vaccinator for the Bramley District of the Bramley Union, vice Craister, resigned.

WAHLTUCH, Dr. A., has been appointed a Physician to the Hulme Dispensary, Manchester.

WATSON, J. D., M.B., C.M., has been appointed Medical Officer for the Northern District of the Cirencester Union, vice Larke.

WILLIAMS, D. W., M.D., has been appointed Physician to the Suffolk General Hospital, Bury St. Edmunds, vice Goodwin, resigned.

Births, Marriages, and Deaths.

BIRTHS.

ADAMS.—On the 18th inst., at Barnes, Surrey, the wife of James Adams, M.D., of a daughter.

CAWLEY.—On the 25th of May, at Glenelg, Adelaide, South Australia, the wife of Dr. Thomas Cawley, F.R.C.S.Ed., M.R.C.S.E., of a daughter.

CRERAR.—On the 16th inst., at Maryport, the wife of Dr. Crerar, of a son.

EDGELOW.—On the 17th inst., at Hertford-street, Mayfair, the wife of Geo. Edgelow, M.D., of a son.

HAYES.—On the 14th inst., at Basingstoke, the wife of Hawkesley Roche Hayes, L.R.C.P., M.R.C.S., of a daughter.

LIVESAY.—On the 20th inst., the wife of Dr. Livesay, of Sudbury, of a daughter.

PARSONS.—On the 6th inst., at Dover, the wife of Chas. Parsons, M.D., of a son.

SHILLITOE.—On the 13th inst., at Birch Mount, Sydenham-hill, the wife of Buxton Shillitoe, F.R.C.S.E., of a daughter.

MARRIAGES.

CHURCHILL—BUTLER.—On the 30th ult., at All Saints', Knightsbridge, Frederick Churchill, M.B., F.R.C.S.E., to Frances, daughter of the late Charles Salisbury Butler, Esq., M.P.

COOKSON—SOFFE.—On the 6th inst., at Edisham, near Bungay, Albert Nesfield Cookson, M.R.C.S.E., to Frances Jane, daughter of the late Wm. Soffe, Esq.

HARRIS—BUCKLAND.—On the 11th inst., at St. Stephen's, Shepherd's-bush, William Harris, L.R.C.P., of Melton, Suffolk, eldest surviving son of Henry Harris, M.D., F.R.C.S., of Redruth, to Annie Buckland, R.A.M., daughter of James Warwick Buckland, Esq., late of H.M.'s Customs, London.

MAIR—MORGAN.—On the 13th inst., at Llansamlet, Glamorganshire, A. H. Mair, A.M., M.B., C.M., of Morriston, Swansea, to Annie M., second daughter of the Rev. M. R. Morgan, B.D., Vicar of Llansamlet.

DEATHS.

AUSTIN.—On the 9th inst., from heart disease, E. V. Austin, M.R.C.S.E., of Reigate, aged 63.

CRAWFORD.—On the 10th inst., R. Crawford, M.D., of Duke-street, Glasgow, formerly of Peebles, aged 44.

DIXON.—On the 6th inst., H. M. Dixon, L.R.C.P.Ed., Medical Superintendent of the "Hamadryad" Hospital Ship, Cardiff, aged 43.

EDWARDES.—On the 15th inst., Robt. Edwardes, M.R.C.S.E., Staff Surgeon R.N., aged 38.

JEFFERY.—On the 10th inst., Dr. Thos. Jeffery, of Gravesend, formerly of Yalding, aged 78.

M'CALLUM.—On the 26th of May, at Hoboken, New Jersey, Dr. Donald M'Callum.

REED.—On the 5th ult., at Ferozepoor, India, Baynes Reed, M.R.C.S.E., Assistant-Surgeon 12th Foot, aged 37.

STEWART.—On the 11th inst., Jas. Stewart, M.D., of Brandon-place, Glasgow, aged 66.

TRAVIS.—On the 14th inst., at Brussels, Nathaniel A. Travis, M.D., of Nice, aged 71.

WARWICK.—On the 9th inst., J. B. Warwick, M.R.C.S.E., of Southwell, Notts.

Notes, Short Comments, and Answers to Correspondents.

MEDICINE IN THE SIXTEENTH CENTURY.

IN England during the sixteenth century the number of learned physicians was fewer and the knowledge of medicine much less extended than in Germany, Italy, and France. "The learned Linacre," says Hecker, "had already died in 1534"; and, according to the same authority, John Chambre, Edward Wotton, and George Owen were the King's body physicians about the time of the fourth epidemic visitation of the sweating sickness. William Butts, of whom Shakespeare makes honourable mention in "Henry VIII.," in all probability held likewise a similar office. These were certainly distinguished and worthy men; but posterity (adds Hecker) has gained nothing from them on the subject of sweating sickness.

Dr. Mark Long.—The conduct of Dr. X. would require much vindication; but on the imperfect, and withal private, report of the proceedings with which we are supplied, we could not give a more detailed opinion. Is there no published report of the inquest?

M.B., (Scarborough.)—We cannot forward private answers. The qualifications mentioned do not justify the use of "Dr."

THE TRAINING OF THE IMBECILE.

AMONG the more memorable incidents of the recent congress of the British Medical Association in London, the visit to the Asylum for Imbeciles at Normansfield deserves a passing notice. That institution—the first private one of the kind in England, and the largest in Europe—is under the superintendence of Dr. Langdon Down, whose labours in the treatment of the idiotic and imbecile have been rewarded with no small measure of success. The visitors, on passing through the gardens and shrubberies and reaching the lawn, suddenly found themselves in the presence of a number of fashionably dressed young ladies intent on croquet-playing, and were agreeably surprised to learn that these were patients, all afflicted with idiocy in various degrees. Dr. Langdon Down then took his guests over the establishment, and brought under their notice some of the more remarkable patients. In the course of his comments he said that out of 2000 cases which had come under his inspection at Earlswood and in his own asylum, 25 per cent. were first-born children—a fact which he connected with idiocy from the greater difficulty of parturition, the repression of the placental circulation, the size of the child's head, and the consequent suspended animation. Statistics show that of children thus born, there are five males to one female. In every case of idiocy there has been a marked proclivity to degenerate or retrograde to a lower type in the human family—some, for instance, approximating to the Mongolian with corrugated tongue and arched palate. Recovery from idiocy, in common with the production of that state, depends not a little on the soil on which the child is born and reared, a clayey soil being much more favourable than a gravelly one to the development of the disease. The mortality, moreover, is 6 per cent. on clay, and only 2 per cent. on gravel. The treatment of the idiot and the imbecile has made much progress since the days of Séguin, of Paris, the founder of all improvement in that field of medicine. The Scottish Lunacy Commissioners, in their last Report, take a rather too desponding view of the practitioner's chance of success in ameliorating the idiot. Experience has shown that improvement is quite practicable, with the essential proviso that the case be taken in time.

Mr. Henry Ashworth, (Faversham.)—Although rare, it does occasionally occur.

ST. JOHN'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—My attention has been called to Mr. Golbourn's extraordinary letter. He speaks of himself as a subscriber to St. John's Hospital. He is not, and never was. He has therefore no *locus standi*. Mr. Golbourn says there was only one member of the Committee at the meeting he attended. I find by the minute-book that there were present, besides himself, two members of the Committee, who were not on the medical staff, one of whom has been a member since the establishment of the hospital, and two members of the medical staff, who are members of the Committee. Mr. Golbourn states that he signed the balance-sheet under protest. Mr. Golbourn actually seconded a resolution ordering the balance-sheet to be printed. Mr. Golbourn doubts if his letter were laid before the Committee, because the letter accepting his resignation was written by a clerk, and he has been informed that Mr. Alexander is a very aged gentleman, and never attends to the business of the hospital. I do attend to the business of the hospital, and I am not a very aged gentleman. The clerk's share in the business is soon disposed of. I do not undertake to write all the letters connected with the hospital with my own hand. Suffice it that they are written. In flat contradiction to his "doubt," I distinctly say that his letter was laid before the Committee, and that the minute notifying it was duly entered in the minute-book on the day of meeting, July 2nd, in the presence of the Committee.

With regard to Mr. Golbourn's statement that twelve months elapsed between the receipt of the summons to attend Committee meetings, I have to inform you that no such summons is necessary. Long ago it was arranged by resolution, duly entered in the minute-book, that the Committee should meet on the first Wednesday in every month at a stated hour; consequently summonses were never issued, nor were they requisite unless the business to be discussed was of a special nature, such as that transacted at each of the meetings to which Mr. Golbourn was summoned.

So much for Mr. Golbourn's facts; his inferences are equally erroneous. It is not the function of a Committee to examine all vouchers, &c.; that is the auditor's work. From time to time our accounts are duly audited, and are undergoing that process now. On every occasion they have been found scrupulously correct. The list of subscriptions and the receipt-book, with the counterfoils, lay on the table at every Committee meeting. Mr. Golbourn could have seen them had he taken the trouble to ask for them. The list was subsequently printed, as was the balance-sheet, and a copy sent to him.

Trusting your readers will now quite appreciate the value of Mr. Golbourn's communication,

I remain, Sir, yours obediently,
HORACE H. ALEXANDER,
August, 1873. Hon. Sec. to St. John's Hospital.

A Medical Officer.—Such duty is neither specified nor contemplated in the General Consolidated Order. At the same time, on any special occasion, at the request of the guardians the medical officer should be willing to accompany them in their visit.

One of the Four.—1. Certainly not.—2. Yes; it is the absence of the faculty of hearing their own voices that makes absolutely deaf children also dumb.

DR. FLEMING'S TREATMENT OF DELHI BOIL.

To the Editor of THE LANCET.

SIR,—In Dr. Parkes's Address in Medicine the treatment of Delhi boil by potassa fusa is attributed to Dr. Fleming; whereas it was practised and written on by Dr. Fraser, 86th Regiment, some years before Dr. Fleming had joined the medical service. Dr. Fraser's paper can be seen in the Army Medical Department Report for the year 1861 or 1862. If I remember correctly, Dr. Fraser does not speak of it as an infallible remedy; nor did I find it so when I used it, after perusing his paper; but in some cases it was a very useful application.

Yours obediently,
August 12th, 1873. A SURGEON-MAJOR.

HEALTH OF SYDNEY.

EIGHTEEN deaths annually to every 1000 people living—such is the rate of mortality in the capital of New South Wales. Sydney has 48 persons to the acre, with a mean death-rate of 23·8 per 1000; in the suburbs the rate is 14 per 1000. In the United Kingdom the towns have 34 persons per acre, with a mean death-rate of 25 per 1000. Sydney pays much attention to water-supply, drainage, sewerage, removal of refuse, and the provision of "lungs"—i. e., of open spaces set with trees; so that, in spite of her increase of population, the death-rate will be yet lower.

Seafarer, (Tenby.)—The original life-boat was built at South Shields by subscription in 1789. The idea arose out of the disastrous loss of the *Adventure*, of Newcastle, in the September of that year. Its builder was Henry Greathead, who suggested the plan of making the keel curved instead of straight. It was first used on the 30th of January, 1790. Captain Hans Busk's life-ship (an ingenious contrivance described in THE LANCET of May 31st, 1873) will be launched at Southampton to-day (Saturday).

A la Bonne Heure.—Communicate with the sanitary authority of the parish.

THE MEDICAL COLLEGE, EPSOM.

To the Editor of THE LANCET.

SIR,—I have watched with some interest the correspondence in your columns on the cuisine department at Epsom College. I first went to Epsom in 1868, and during the whole time I have been there I have never known the food so good as at present, and some of your correspondents have stated much that is incorrect. As far as I remember, members of the Council visit the hall quite as much as formerly. "H. S." remarks chiefly on the vegetables, and among the vegetables or substitutes which I remember as having been served up are the following:—Potatoes, carrots, greens, turnips, lettuces, boiled rice, and suet pudding; the potatoes either boiled, steamed, or fried; the rice or suet puddings in addition to the ordinary puddings. There has always been a dislike shown to the cocoa by those who drink milk, which, as provided at the College, is not so good as the cocoa, and this may be accounted for by the fact that the urns in which it is placed have a disagreeable remnant of tea left from the previous night. I have never known the bread soaked, and even were it so, this I can scarcely believe was with the consent or knowledge of the authorities. Next, your correspondent states that boys are punished for leaving food. Now this is false; for there is always a prefect or master in the hall, and if any suspicious food be taken to them there is no chance of their being punished.

I remain, Sir, yours truly,

Shanklin, August 20th, 1873. A PRESENT EPSOMIAN.

To the Editor of THE LANCET.

SIR,—I hear that the Council can take no notice of anonymous letters. Allow me to say I am the "H. S." of August 2nd, and ready and willing to meet the Council in the matter. Two boys to my knowledge left last term, their parents being dissatisfied with the general arrangements of the College. I am, Sir, your obedient servant,

THOS. TAYLOR,
An Honorary Secretary from the first.

Bocking, Braintree, Aug. 19th, 1873.

Anglo-colonial, (Limerick.)—In Surinam medical science is under the special supervision of the Government (that of the Netherlands). Paramaribo possesses a large military hospital, with 118 beds for officers and civilians, and 280 beds for sailors, soldiers, and natives. In each district there is a doctor, who is a Government official, and every care is taken for the proper treatment of labourers on each estate. The new Government regulations are very stringent on this point, heavy penalties being inflicted for contravention of the law.

Health Officer, (Hull.)—Common salt, so recently vindicated as a disinfectant, has long been credited with the power of checking the plague. In Surtees' History of Durham we read that a "curious tradition prevails at Shields, that when the plague raged there with great violence the persons employed about the salt works entirely escaped the infection."

Surgeon Boileau will see that we have not been unmindful of his request.

VACCINATION STATISTICS.

To the Editor of THE LANCET.

SIR,—A return of the births registered in the North Witchford Union from 1st July to 31st December, 1872, and the results of the working of the Vaccination Act since then, are, I think, worthy of a passing notice.

Chatteris Registration District.—Number of births registered, 193. Of these, successfully vaccinated, 148, or 89·7 per cent.; died before vaccination, 14, or 8·5 per cent.; removed and cannot be traced, 3, or 1·8 per cent.

March Registration District.—Number of births registered, 125. Of these, successfully vaccinated, 116, or 92·5 per cent.; died before vaccination, 8, or 6·4 per cent.; removed and cannot be traced, 1, or ·8 per cent.

Thus in the whole union during the time specified there have been 290 births registered, of which 91·25 per cent. have been successfully vaccinated, 7·45 per cent. have died before vaccination, and 1·3 per cent. have been lost sight of.

In connexion with this subject I may state that there have been cases of small-pox recently in several parishes of the union; but, happily, in the majority of instances confined to a single patient in the same house.

Yours obediently,

MITCHELL WILSON, M.B.,
Chatteris, August 18th, 1873. Medical Officer of Health.

Student is quite right in being particular as to the text-books he studies from. "Choose the best manual and stick to it," was the remark of the Latin grammarian Zumpt, impressed with the time and money spent in fancying one book after another. In Practice of Physic there is still no better student's book than Watson's Lectures; while Syme's Principles of Surgery remains unrivalled for clearness, brevity, and practical force.

Australasia will find the information he requires in the Students' Number of THE LANCET.

Mr. Richard King, (Rugby.)—A double qualification is necessary.

SCURVY.

VASCO DE GAMA'S rounding the Cape of Good Hope was attended by an unexpected calamity—his crew being attacked by an unknown disease, characterised by "putrid spots overspreading the body, the mouth filled with flesh which did not seem to belong to it, the limbs unable to move exhaustion and debility of the whole frame." This is generally recognised to be the first notice of scurvy, date 1497. The remedy, lime-juice, was first pointed out in 1636 by John Woodfall in a work written in English, and in 1753 a Fellow of the London College of Physicians published a tract to the same effect.

Bath.—There are no superior degrees to those conferred by the London University; but people are influenced by other reasons in selecting one of the other Universities named by our correspondent, all of which rank very high.

Peronens Brevis.—We do not prescribe for lay readers.

HYDRATE OF CHLORAL.

To the Editor of THE LANCET.

SIR,—In compliance with your request for information as to the therapeutics of hydrate of chloral, an experience of two years as a medical officer in this asylum enables me to speak of its great utility as a sleep producer, although in a number of cases I have noticed its sedative action to be totally lost, and in many cases it has produced an amount of excitement and violence never before exhibited previous to its use. The following case is the most extraordinary instance of its abnormal action that has come under my observation.

A female patient, aged twenty-one, under treatment, suffering from dementia, with periodical attacks of sexual excitement, generally co-existing with the catamenial flow. During the first attack of excitement she was ordered to take thirty grains of chloral night and morning. On the third or fourth day of its administration an eruption appeared, in every respect similar to that of measles—in fact, that was the diagnosis, she having a little coryza, catarrh, &c. The temperature in the axilla was 100° F. The chloral was stopped, and the eruption disappeared in three or four days, without leaving any sequela of measles. Four or five weeks later she was again excited and sleepless. Chloral was ordered to be given as before. After its administration, much to the surprise of the medical officers, the measles reappeared, and the chloral was immediately withheld, and within twenty-four hours the eruption had disappeared. The ordinary dose given here is thirty grains, and this quantity produces sleep in the majority of cases, its sedative action speedily showing itself if the patient be removed from all noise, &c., and this I think accounts for the greater certainty of its action at night than during the day.

I remain, Sir, yours truly,

BERNARD NEAL, L.R.C.P.E.,
August, 1873. Assist. Med. Officer, Cornwall County Asylum.

Viator.—Yes; the cholera is now worse at Berlin than at Vienna. The overcrowding of the North German city has reinforced the epidemic most effectively. In the Friedrichstrasse the 2nd Grenadier Regiment of the Guards, after losing from twenty to thirty men in each company, had to be removed to the interior.

L. de Sanctis (Dumfries) had better apply to the Chief of the Army Medical Staff at the Hague.

REGISTRATION AT THE GENERAL MEDICAL COUNCIL.

To the Editor of THE LANCET.

SIR,—It is not generally known to medical students that, after passing their examination in Arts, it is necessary to register at the General Medical Council. I am referring to those students who commence their professional career either by attending the practice of a recognised provincial hospital, or as pupils of medical practitioners. It is customary for many medical students to spend the first of their four years of study with a general practitioner where there is a recognised hospital. The register comes down from the Royal College of Surgeons at the commencement of each session, their names are inserted, and they innocently think that all is right. Imagine their astonishment when they arrive in London the following year, and are asked if they have been registered at the General Medical Council, and they reply that no one ever told them anything about the General Medical Council, and they are surprised to find that instead of being able to be placed on the roll as registered medical practitioners in three years, it will be after four years. Such, I am sorry to say, is the fate of myself and several other students from a provincial infirmary; and you can imagine our loss in a pecuniary sense, as well as the inconvenience of delay. Many of my fellow-students are sleeping on in happy ignorance, or rather innocence. I hope this will awaken them, and that it may be a warning to those gentlemen who contemplate commencing their medical studies next October. I hope something may be done. I would suggest that blank forms should be kept at every recognised provincial hospital, and that the house-surgeon or secretary should be responsible for them, and see that they are duly returned. I sincerely hope, for the benefit of the profession, that this important matter will be taken up at head-quarters.

I remain, Sir, yours truly,

W. H. WRIGHT, Medical Student.
Royal Infirmary School of Medicine, Liverpool, Aug. 8th, 1873.

A. N., (Kirkcudbright.)—The examination of the urine in diagnosis was very common in England two centuries and a half ago, as may be seen from the publications of the Percy Society, vols. vi. and ix. The difference between those days and the present lies rather in the appliances than in the minds employing them.

Mr. Spencer Watson's communication has been received.

THE TYPHOID EPIDEMIC AT MARYLEBONE.

To the Editor of THE LANCET.

SIR,—Not only having been much annoyed by inquiries, but having lost several customers, owing to the publication that "a large Dairy Company" has been the means of propagating typhoid fever, will you kindly allow me space to say that it is not "The Aylesbury Dairy Company, Limited."

I am, Sir, your obedient servant,

Bayswater, August 16th, 1873. JNO. ASHTON, Secretary.

F. J. S., (Edgbaston.)—The early Christians, if we may believe Tertullian and Augustine, denounced the dissection of the human subject. The former, speaking of one Herophilus, doubts whether to call him *medicum* or *lanium*, physician or butcher.

Staff Surgeon Gabriel, (Portsmouth.)—We are not aware that any method of treatment has received the special sanction of authority. There is a general agreement as to the injurious effect of opiates and brandy during the collapse stage.

M.B. (Plymouth) had better consult Wunderlich's work, translated for the Sydenham Society, and that by Dr. Sydney Ringer.

Dr. Mundic is thanked for his suggestion.

THIRD ATTACK OF MEASLES.

To the Editor of THE LANCET.

SIR,—I beg to add another instance of a third attack of measles. In this particular case I personally attended, and can therefore vouch for its correctness. The first attack happened when the child was three months old, the second when a year and eleven months, and the third when five years and nine months. In the first two attacks the catarrhal symptoms were well marked, and the rash decided; but the last was very slight, modified, so to speak, as if the patient by this time were getting insusceptible to the disease. I also attended a young lady, aged twenty-one, who had a very sharp attack of measles, and after two weeks' convalescence was prostrated with a second and even sharper attack; measles, however, being in the house on both occasions. It is rather unusual to meet with such cases; but second attacks at intervals of some years are by no means uncommon.

Yours very truly,

Govan, August 13th, 1873. JAMES BARRAS, M.D.

J. D. S., (Woking.)—Sympathy is not unknown as a cause of disease. Harvey told Bishop Hacket that he had in his own practice seen during the Rebellion more diseases generated from the mind than from any other cause.

A Medical Officer of Health should apply to the Medical Department of the Local Government Board.

Tyro, (Galway.)—The Rev. Dr. Collis Day's "Pontes Classici" will prove a convenient help over the first difficulties of Latin.

COMMUNICATIONS, LETTERS, &c., have been received from—Mr. T. Holmes, London; Dr. Tilt, London; Mr. Duncan, Glasgow; Mr. Hayes, Varna; Mr. Lambrick, St. Agnes; Mr. Ashton, Bayswater; Mr. Hynes, Ennis; Dr. Pennefather, London; Dr. Ritchie, Otley; Mr. Shore, Southampton; Mr. Daniel, Kingston-on-Thames; Dr. Kelly, Westmeath; Mr. Foster, Wolverhampton; Mr. Belcher, Burton-on-Trent; Dr. Pettigrew, Edinburgh; Dr. E. Brown; Mr. M'Carthy, Malton; Mr. Cresswell, Halstead; Mr. Stock, Bristol; Mr. Binks, Wakefield; Mr. Vaughan, Doncaster; Mr. Cresswell, Attleborough; Miss Jennings, Greenhithe; Dr. Mansor, Brixton; Mr. Gilbert, Stamford; Mr. Nicholls, Chelmsford; Mr. Heath, Totnes; Mr. Farquharson, London; Rev. R. Manley, Great Missenden; Mr. Brereton, Pontlottyn; Mr. Vernon, Pelham; Mr. Evans, Bakewell; Dr. Hopkins, Llantrisant; Mr. Allan, Fort William; Mr. Symes, Dorchester; Mr. Vivian, Tarbach; Dr. Wilson, Chatteris; Mr. Richards, Aberdare; Mr. Griffiths, Lifton; Mr. Hewitt, Beverley; Dr. MacEwen, Glasgow; Mr. Willcocks, Eastry; Dr. Crerar, Maryport; Dr. Boileau, Dublin; Mr. Coates, Salisbury; Dr. Wright, Liverpool; Mr. Horgan, Goole; Mr. Bruce, London; Dr. Pratt, Cardiff; Dr. Latham, Edinburgh; Dr. Oliver, Edinburgh; Mr. Winward, Wigan; Mr. Tattersall, Liverpool; Mr. Dowie, Ilfracombe; Mr. Morgan, Neath; Mr. Hendery, Inverary; Dr. Black, Glasgow; Mr. Brown, Chester; Mr. Hall, Salford; Mr. Green, Colchester; Mr. Jenner, Ross; Dr. Landon, Scarborough; Mr. Gabriel, Portsmouth; Mr. Dyas, Exeter; Mr. Hodgkin, Newcastle; Mr. Jeaffreson, Newcastle; Mr. Long, Dalston; Dr. Britton, Halifax; Mr. Macdonald, Manchester; Mr. Willington, South Kensington; Dr. Vale, Holloway; Mr. Rankin, Luton; Mr. Clarke, Dalton-in-Furness; Dr. Miller, Edinburgh; Mr. Redfern, Syston; Dr. Pepper, Dublin; Mr. Sharp, Truro; Mr. Fawcett, Dolgelly; Mr. Drummond, Aberfeldy; Mr. M'Cash, Glasgow; Mr. Walker, Corwen; Mr. Garland, Yeovil; Mr. Taylor, Bocking; Mr. Atkinson, Ripponden; Mr. Ransom, Elmham; Mr. Gross, Wednesbury; Mr. Hayden, Limehouse; M. De Bylandt, Netherlands Legation; Dr. Strange, Worcester; Dr. Alcock, Cannock Chase; Mr. Charlesworth, Romney; Dr. Daglish, New Romney; Dr. Armison, Newcastle; Dr. Sadler, Barnsley; Mr. Gilbert, Stamford; Dr. Crothers, Liverpool; Dr. Highmore, Sherborne; Dr. M'Lintock, Church Stretton; Mr. Hargett, Liverpool; Dr. Hayman, London; Dr. Harris, Redruth; Mr. Hayes, Basingstoke; Mr. Storr, Doncaster; Dr. Hine, Sheffield; Dr. Grieve, London; Dr. Reed, London; Dr. Rosser, Croydon; Capt. Mercier, London; Mr. Thomson, Peterborough; Dr. Thornton, London; Dr. Adams, Barnes; Dr. Fletcher, East Soham; Mr. Nowell, Halifax; Dr. Sylvester, Pimlico; Mr. Worts, Fordham; Mr. Merryweather, Loughborough; Dr. Mundie, Hackney; Mr. Ashworth, Faversham; Mr. Baker, Wheathampstead; Dr. Hayward, Liverpool; Dr. Gill, Doynton; Mr. Alexander, London; Mr. Evans, Kensington; Mr. Williams, Liverpool; Mr. Hicks, Chippenham; Mr. Brixley, Leeds; Mr. Walsh, Dover; Mr. Whitton, Bath; Mr. Mann, Edinburgh; Dr. Latham, Dalbeattie; A. B. S., Derby; One who Stands up for the Dignity of the Profession; W. A. C.; The Victims; A la Bonne Heure, A Present Epsomian; M.B., Plymouth; A Medical Officer of Health; R.N.; R. J. H.; Australasia; West Africa; Studens; &c. &c.

Chemists and Druggists' Advocate, Irish Times, Grant College Students' Journal, Greenwich Chronicle, Dublin Evening Mail, Isle of Man Times, Huddersfield Chronicle, Ulverstone Mirror, Aberdeen Journal, Grocer, Army and Navy Gazette, Barrow Daily Times, Guy's Hospital Gazette, and *Cumberland Advertiser* have been received.

METEOROLOGICAL READINGS

(Taken by Steward's Instruments).

THE LANCET OFFICE, AUGUST 21ST, 1873.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Wet Bulb.	Dry Bulb	Solar Radia. in Vacuo	Max. Temp. Shade	Min. Temp.	Rain-fall.	Remarks at 8 A.M.
Aug. 15	30·11	W.	60	64	107	77	57	...	Fine
„ 16	30·05	S.W.	61	64	116	85	59	...	Overcast
„ 18	29·92	S.W.	56	59	98	69	52	0·53	Rain
„ 19	29·65	W.	58	59	104	70	54	0·04	Overcast
„ 20	29·85	W.	55	60	102	68	52	...	Overcast
„ 21	29·88	W.	54	58	...	...	52	...	Overcast

Medical Diary of the Week.

Monday, Aug. 25.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

Tuesday, Aug. 26.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Aug. 27.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
LONDON HOSPITAL.—Operations, 2 P.M.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
CANCER HOSPITAL.—Operations, 3 P.M.

Thursday, Aug. 28.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Friday, Aug. 29.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
GUY'S HOSPITAL.—Operations, 1½ P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Aug. 30.

HOSPITAL FOR WOMEN, Soho-square.—Operations, 9½ A.M.
ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M.
KING'S COLLEGE HOSPITAL.—Operations, 1½ P.M.
ROYAL FREE HOSPITAL.—Operations, 9 A.M. and 2 P.M.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

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